ASBPE MAGAZINE OF THE YEAR 2004 Computerworld named Magazine of the Year by the American Society of Business Publication Editors. PAGE 6

COMPUTERWORLD

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User Indifference Hurts Chances of Comdex Revival

Lack of vendor commitments dooms '04 event, but IT managers hold key to '05 and beyond

BY TODD R. WEISS

An inability to attract top IT vendors may have killed Comdex 2004, but the real challenge confronting the organizers is to ensure that a lack of interest among IT professionals doesn't kill the show altogether.

MediaLive International Inc. shocked IT users and vendors last week when it canceled this November's Comdex show. MediaLive said that the show could have been profitable but that the unwillingness of major IT vendors such as IBM and Dell Inc. to exhibit meant that it wouldn't be a worthwhile draw for corporate IT users.

Instead, the San Francisco-based company said it would skip this year's show to "reshape the event with the cooperation of information technology industry leaders" and get it ready for November 2005. MediaLive has established a Comdex Advisory Board that includes Microsoft Corp. and other vendors to

Comdex, page 49

INSIDE

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NEWSCOM.COM

Comdex drew 40,000 people in 2003 – and 200,000 at its peak in the '90s.

ON-Demand, UN-Hyped

RICH BORGE

SPECIAL REPORT

UNCLEAR ON THE CONCEPT? We explain on-demand computing in plain English and explore the three-way split among users: Some are doing it, some are examining it, and some are extremely skeptical. **STORIES BEGIN ON PAGE 33.**

TOP USER CONCERNS ABOUT ON-DEMAND COMPUTING

1. Cost 2. Vendor lock-in 3. Security

COMPUTERWORLD SURVEY OF 765 IT PROFESSIONALS

ONLINE

Complete results of Computerworld's exclusive survey: QuickLink a4690

PeopleSoft's Pricing Policies Annoy J.D. Edwards Users

Confusion, potential cost increases cited

BY MARC L. SONGINI
DENVER

PeopleSoft Inc.'s effort to migrate former J.D. Edwards & Co. customers to its own software licensing and maintenance pricing model has some users bristling about what they say is a lack of clarity and consistency, as well as the possibility that that they could face higher costs.

During an open forum at last week's Quest Global Conference here, users of what is now PeopleSoft's EnterpriseOne line of business applications raised questions about the company's attempts to move them from their J.D. Edwards software licenses to its enterprise licensing scheme.

The users complained that

PeopleSoft, page 16

> **"Pricing has definitely been the most challenging philosophical difference between [PeopleSoft and J.D. Edwards].**
>
> **WILLIAM GABBY,** CARGILL INC.

ISO Endorses Key Security Certification

Security managers praise OK of CISSP

BY JAIKUMAR VIJAYAN

The International Standards Organization last week gave its stamp of approval to the CISSP security certification for IT workers, and a half-dozen security managers said the endorsement should help enhance the certification's legitimacy and acceptance.

They added that boosting CISSP's credibility would be a welcome development at a

CISSP, page 16

NEWSPAPER

[illegible] BUSINESS AS USUAL

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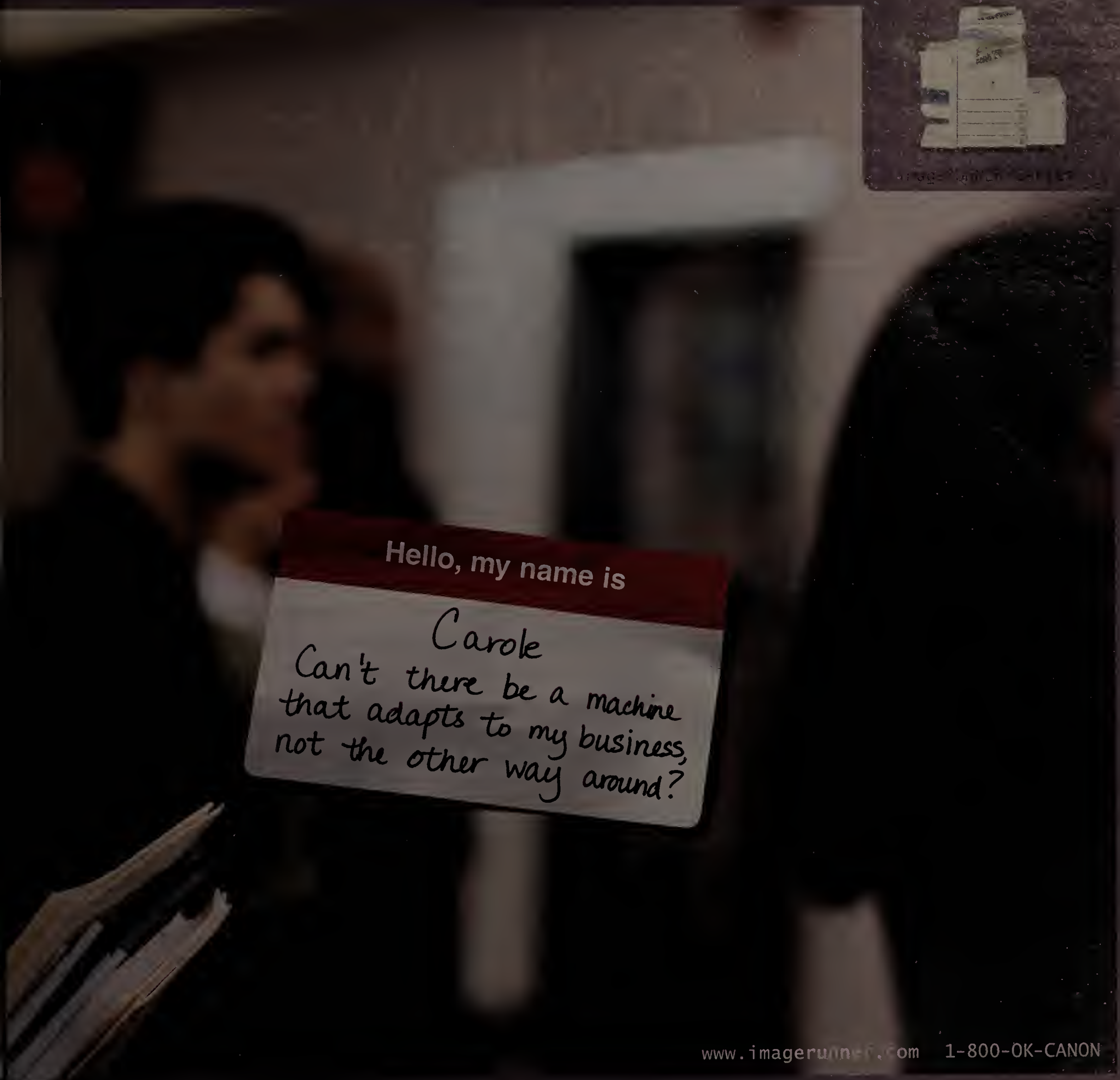
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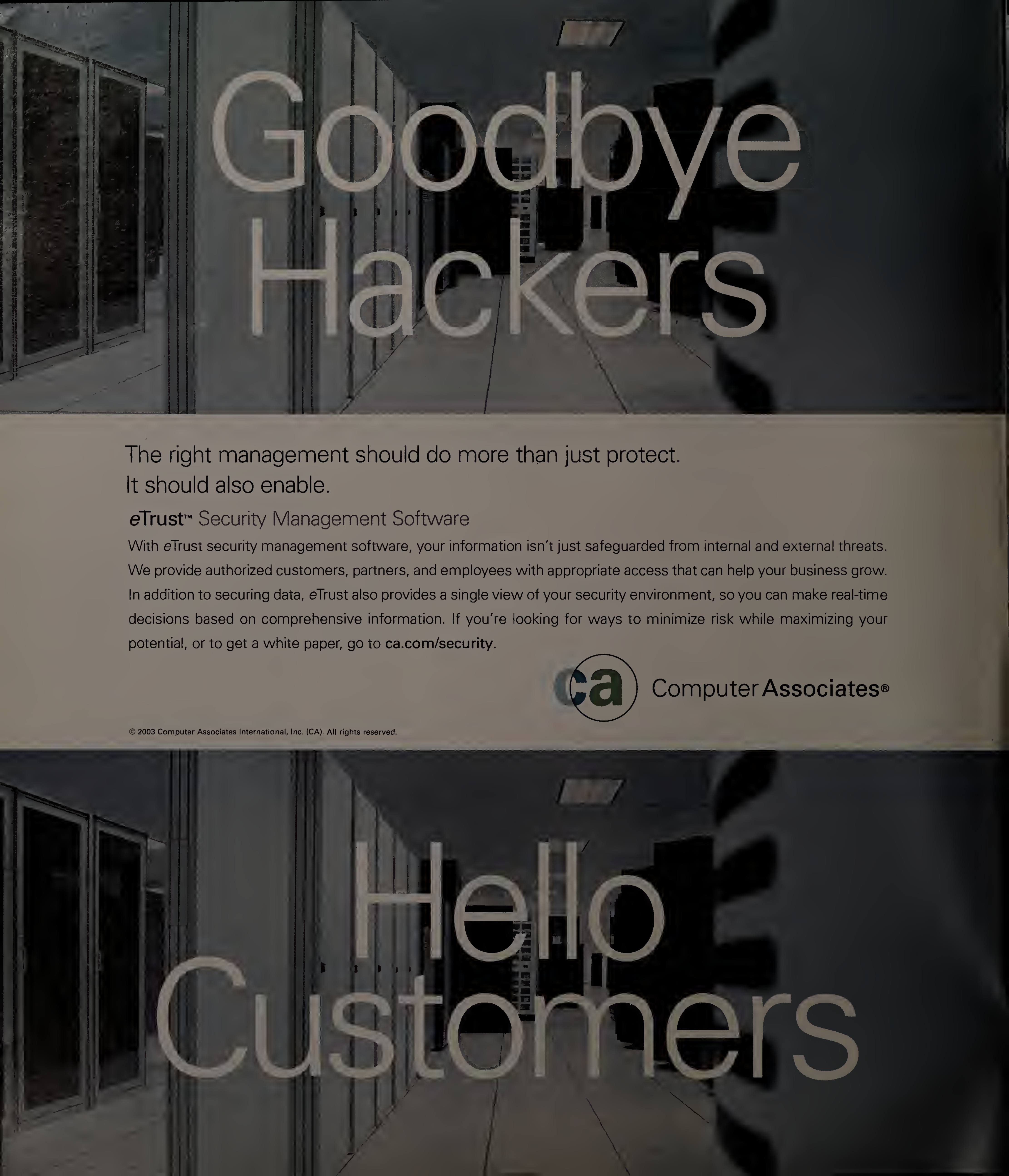

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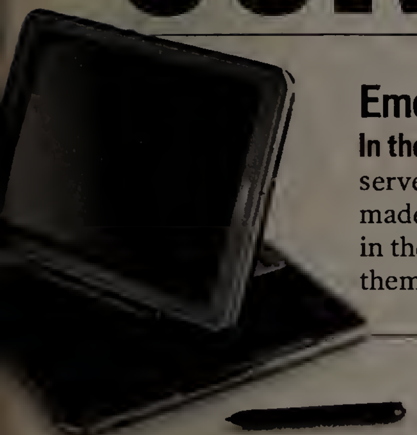

Emerging Technologies Progress Report

In the Technology section: Tablet PCs, InfiniBand, server blades and iSCSI storage-area networks made big splashes when they broke into the market in the past two years. How loud is the buzz around them now? **Page 23**

Pulling the Strings

In the Management section: Signing the contract is the easy part. Managing an outsourcing relationship requires upfront planning, a highly skilled management team, constant communication and an expanded budget. **Page 29**

NEWS

6 **Cisco adds endpoint security** tools for controlling network access by PCs and mobile devices.

7 **The FCC sides with airlines** in their battle with airports for control of Wi-Fi spectrum.

7 **Municipal governments** deploy Wi-Fi networks for public safety and Internet access.

10 **The JavaOne conference** will showcase vendors' efforts to simplify Java programming.

12 **California's new privacy law** for online businesses goes into effect this week, but most companies already comply.

12 **Sprint PCS and Cingular plan** high-speed cellular networks, matching an earlier move by Verizon Wireless.

14 **Offshore and domestic** IT services firms are narrowing the differences between their offerings.

14 **Many IT departments are** reluctant to take part in Sarbanes-Oxley efforts to document IT controls, auditors say.

ONLINE

ONLINE DEPARTMENTS

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What's a QuickLink?
On some pages in this issue, you'll see a QuickLink code pointing [illegible], [illegible] on our [illegible] box, [illegible]

OPINIONS

18 **Mark Hall** thinks it's a shame that Apple is often ignored by corporate IT, but the company's own secrecy about its product plans should get much of the blame.

18 **David Moschella** knows why executives bought into all that "IT Doesn't Matter" stuff last year. Your job is to convince them otherwise.

19 **Virginia Robbins** wonders why even mild-mannered help desk managers become arrogant despots after they get their MCSEs.

27 **Robert L. Mitchell** says Windows XP Service Pack 2 is notable not just for what it does but also for showing how far Microsoft may be willing to go to improve the security of Windows.

31 **Barbara Gomolski** has seen the wrong chargeback systems cause friction between IT and business, but she says getting it right isn't that hard.

50 **Frankly Speaking: Frank Hayes** doesn't lament the fact that Comdex is as good as dead. It ran its course, as all trade shows do, and now is the time to bury it and make way for the next big thing.

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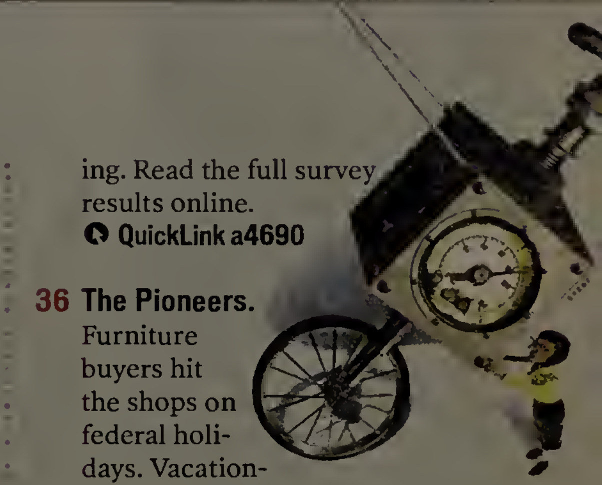
SPECIAL REPORT ON-DEMAND COMPUTING

On-Demand, Un-Hyped

On-demand computing is one of the those buzzwords with multiple definitions. In this special report, we've tried to clarify the situation and spell out the pros and cons, so you can figure out where you stand. **PACKAGE BEGINS ON PAGE 33.**

34 **In Plain English.** On-demand computing at the enterprise level takes discipline, a deep knowledge of business processes and a rethinking of the organizational structure of IT. Experts and users like Cigna's Ben Flock (below) explain what you need to know. **ONLINE:** In an exclusive *Computerworld* survey, a majority of the 765 IT professionals who responded indicated some degree of skepticism about on-demand computing. Read the full survey results online. **QuickLink a4690**



36 **The Pioneers.** Furniture buyers hit the shops on federal holidays. Vacationers hit the roads in summertime. Businesses with seasonal demands like these have found savings by being early adopters of on-demand computing.

38 **The Tire-Kickers.** Three IT managers are giving on-demand a close look, but they aren't yet sold on it. Here's a look at their hopes for this new computing model and their key concerns.

40 **The Skeptics.** IT managers like Damien Bean (right) of Hilton Hotels reveal their top concerns about on-demand computing.

42 **Opinion:** All the major vendors are talking about on-demand computing as a server technology. But columnist Mark Hall says there's real value in exploiting this computing model on the desktop.

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Opposing Views. CIO Paul Mercurio talks about why on-demand computing works for Mobil Travel Guide. **QuickLink 47366** And Hilton Hotels' vice president of corporate systems, Damien Bean, sounds off on its pitfalls. **QuickLink 47365**

The Future of On-Demand. Industry visionaries provide their boldest predictions about the future of on-demand/utility computing. **QuickLink 47061**

Vendors Answer Back. Representatives from Hewlett-Packard, IBM and Sun address customers' top concerns about on-demand computing. **QuickLink 47454**

AT DEADLINE

Check for IIS Patch, Microsoft Warns

Microsoft Corp. urged systems administrators to ensure that they have installed a previously released software patch to protect themselves from an apparent attack against Web sites running the company's Internet Information Services 5.0 software. Users who haven't installed the patch detailed in Microsoft Security Bulletin MS04-011 appear to be at risk, according to the software vendor.

Security researchers said the attack involves a group of Russian hackers who are breaking into Web sites and installing malicious code in an effort to steal credit card numbers and other data from Web surfers. It's still not clear what vulnerability they're exploiting, said Marty Lidner, an incident-handling team leader at the CERT Coordination Center in Pittsburgh. But following Microsoft's advice would be "prudent," he added. (For more details, go to our Web site: QuickLink 47818.)

Microsoft Slows Pace on ERP Apps

Microsoft is slowing development work on a new family of ERP applications known as Project Green and will instead focus on upgrading its four existing product lines. The number of developers assigned to Project Green is being cut from about 200 to 70, Microsoft said, adding that the new line now won't be ready until 2008 at the earliest.

Short Takes

INTEL CORP. has found a flaw in its recently launched 915 G/P and 925X chip sets that can prevent PCs from starting up normally. A spokesman said Intel plans to recall some of the devices. . . . IBM's TIVOLI SOFTWARE unit today plans to announce workload-scheduling software that works across installations of servers, mainframes and clustered systems. Prices start at $200.

Cisco Unveils Products For Endpoint Security

Promises stronger integration ties to third parties

BY JAIKUMAR VIJAYAN

Cisco Systems Inc. last week rolled out the first set of products under its Network Admission Control program, which is designed to help companies enforce security policies on network endpoint devices such as PCs and mobile systems.

The company also said it will seek broader participation from third-party security software vendors in response to complaints that the NAC program is too proprietary. Currently, Network Associates Inc., Symantec Corp. and Trend Micro Inc. are the only companies working with Cisco on the endpoint effort, which was announced last fall [QuickLink 43027].

Among the products released last week was software called Cisco Trust Agent. Cisco said the agent technology can be used on servers and client systems to collect security-related data such as operating system patch levels and the status of antivirus tools. The software sends the data to new NAC-enabled routers, which automatically decide whether to allow devices to access networks based on their security status.

Filling a Void

Cisco's NAC technology addresses the growing need for companies to protect not just their network perimeters but also the devices connecting to them, said Ken Kucera, a senior vice president at First National Bank of Omaha.

Cisco's market-leading status puts it in a position to provide that level of protection, Kucera added. "I've always wondered why Cisco wasn't in this space before," he said.

But to be useful to more users, Cisco must let more security vendors hook into the NAC architecture, said Joel Conover, an analyst at Current Analysis Inc. in Sterling, Va.

For instance, Cisco Trust Agent collects security information only from antivirus software sold by Network Associates, Symantec and Trend Micro. Rival products from companies such as InfoExpress Inc. and Zone Labs Inc. draw information from more security tools, including host-based intrusion-detection systems and firewalls.

So far, Cisco has been reluctant to let other vendors participate in the NAC effort, said Fred Feldman, vice president of marketing at San Francisco-based Zone Labs. "Our concern is that they will use their position to freeze best-of-breed vendors out of the market," Feldman said.

"Today, it's a closed interface," said Stacey Lum, CEO of InfoExpress in Mountain View, Calif. "If Cisco doesn't open it up, then it's Cisco against the rest of the world."

Cisco is aware of such concerns, and in the third quarter it will set up a NAC integration program that will be open to other vendors, said David King, director of business development for Cisco's virtual private networking unit. The company will make select NAC APIs available, including one for Cisco Trust Agent, King said.

He added that in the future, Cisco Trust Agent will be able to collect information from host-based firewalls, intrusion-detection software and other security applications on endpoint systems. 47781

Future Additions

Cisco's long-term development plan includes these features:

- **NAC integration with additional Cisco products,** such as its switches and remote access VPN technologies
- **Support for the 802.1x security protocol**
- **Expanded operating system support in Cisco Trust Agent** to include Windows Server 2003, Linux and Solaris

STORAGE TRAINING

Cisco wants to get VARs up to speed on how to configure its storage switches in SANs:
QuickLink 47767
www.computerworld.com

Computerworld Named Magazine of the Year

BY DON TENNANT
PHILADELPHIA

Computerworld last week was named Magazine of the Year by the American Society of Business Publication Editors.

At a national awards ceremony held here, ASBPE officials announced that *Computerworld* had won the honor among business publications with circulations over 80,000. The judges cited its "cutting-edge" content, design and involvement with readers.

In accepting the award, *Computerworld* editor in chief Maryfran Johnson stressed that it's the relationship with readers that drives the publication's commitment to a high editorial and design standard.

"We're gratified by what we get to do every week," Johnson said. "Just that we have the privilege of talking with the readers we get to talk with is a great part of the thrill and the enjoyment we have in putting the publication together. It's wonderful to be honored for that."

DON TENNANT

COMPUTERWORLD's Maryfran Johnson and Bob Carrigan hold the Magazine of the Year award.

Bob Carrigan, CEO of Computerworld Inc., also expressed his appreciation for the award and what it signifies. "*Computerworld*'s commitment to reader advocacy is what being the voice of IT management is all about," he said. "The fact that the judges put such a strong emphasis on being involved with readers and delivering special value to them is very gratifying."

Computerworld won 13 other national ASBPE editorial and design awards, including gold awards for best news section and best special section, and a sweep of the bronze, silver and gold awards for front cover design of a news tabloid. The *Computerworld.com* Web site was given a bronze award for original Web news section.

CSO, a sister publication of *Computerworld*, won the Magazine of the Year award for publications with a circulation under 80,000, giving parent company International Data Group a sweep of the category.

Also at last week's ceremony, IDG founder and chairman Patrick J. McGovern was honored as the recipient of the ASBPE's 2004 Lifetime Achievement Award. ASBPE Awards Committee Chairman Roy Harris credited McGovern with "almost single-handedly" establishing the IT publishing industry with the launch of *Computerworld* in 1967. 47788

FCC Sides With Airlines in Fight Over Wi-Fi Spectrum

Commission rules that it, not airports, has jurisdiction over wireless airwaves

BY BOB BREWIN

The Federal Communications Commission last week handed airlines a victory in their battle with airport authorities over control of Wi-Fi spectrum at airports, ruling that it has exclusive jurisdiction over the use of unlicensed spectrum "regardless of venue."

The FCC acted in response to a petition filed in March by the Industrial Telecommunications Association, a trade group that represents airlines, package-delivery couriers and companies in other industries on spectrum issues. In the petition, the ITA asked the FCC to stop airports from banning wireless network installations by individual tenants.

Airport authorities had claimed the right to manage the spectrum within their boundaries and require that tenants use airportwide Wi-Fi networks instead of deploying their own. Just last week, Logan International Airport in Boston turned on a network that covers its entire facility and said all tenants would have to pay usage fees to run their wireless applications.

'Anticompetitive' Moves

The ITA cited Logan's Universal Wireless Ethernet System, a similar network at Denver International Airport and others planned for the Los Angeles and the Raleigh-Durham airports in its petition to the FCC, labeling the moves by the airports to restrict individual Wi-Fi networks as "anticompetitive activities."

The FCC issued its ruling late Thursday. In a statement the next day, Laura Smith, the ITA's president and CEO, said the ruling was "a big score for our airline members."

"The FCC has made the right decision," United Air Lines Inc. said in its own statement. "United can now install Wi-Fi systems in our tenant space, bag rooms, bag claim areas and on the ramp without months of negotiations and unnecessary costs."

Officials at Denver International and the Massachusetts Port Authority, which runs Logan, didn't return calls seeking comment by deadline.

Prior to the ruling, Massport spokeswoman Barbara Platt said the use of a single network at the airport provides for better management of the wireless spectrum there and "ensures Wi-Fi runs smoothly for all users."

Like Massport, Denver International maintained that it needed to manage the Wi-Fi spectrum in the unlicensed 2.4- and 5-GHz bands to ensure frequency and spectrum coordination on its property. "If we don't coordinate, it's going to be a zoo out there," said Jim Winston, the airport's director of telecommunications. "There would be mass confusion."

But Mike Mader, a ground systems radio engineer who handles Wi-Fi installations for United, said the cost of using airportwide networks is an "unnecessary expense" for the airline. United has installed Wi-Fi networks to support bag-scanning at numerous airports, including its Chicago hub. Mader said that approach is more cost-effective than paying usage fees to airports.

He added that United experienced technical problems with a network from AT&T Wireless Services Inc. at Denver International. The network access points didn't provide adequate coverage for United's bag-scanning system, Mader said, noting that the wireless signals didn't reach far enough to support scanning of late bags being loaded into planes.

In addition, United's signals faced interference from another 2.4-GHz network, which was eventually traced to an unapproved installation at the airport's central car-rental facility. The problems in Denver began last October and weren't resolved until this month, Mader said. 47739

> **Unfortunately, a number of ITA members who are airport tenants have experienced a significant amount of difficulty with implementing unlicensed wireless systems. The difficulties stem solely from unnecessary limitations and restrictions put in place by the airport authorities.**
>
> ■ EXCERPT FROM THE ITA'S PETITION TO THE FCC

FOR MONEY'S SAKE

The ITA claims restrictions on individual Wi-Fi networks are aimed solely at increasing airport revenue:

QuickLink 47740
www.computerworld.com

Local Governments Deploy Wide-Area Wi-Fi Networks

Setups support public safety, Internet access

BY BOB BREWIN

Wi-Fi hot spots are starting to morph into hot zones as local governments adapt the technology to provide broadband service for police and fire departments, in addition to wireless Internet access across areas ranging from downtown districts to hundreds of square miles.

Last week, the government of Spokane, Wash., turned on a dual-use Wi-Fi network in a 100-block area of the city's downtown. And over the weekend, the city of Rio Rancho, N.M., was due to launch the first phase of a network for public safety workers and general Internet access. Once it's completed in December, Rio Rancho's network will cover 103 square miles.

Meanwhile, Cook County, Ill., which includes Chicago, this month received $12.1 million from the U.S. Department of Homeland Security for the first phase of a public safety Wi-Fi network that eventually will cover all of the county's 940 square miles. The network is expected to provide mobile data services at speeds up to 54Mbit/sec.

Joel Hobson, network services manager for the city of Spokane, said the downtown hot zone there is a mile long and a third of a mile wide. It's covered by five 802.11b Wi-Fi base stations plus high-gain antennas from San Francisco-based Vivato Inc.

Public safety users access the network through virtual private network connections. Hobson said Spokane has equipped roughly 50 vehicles with rugged mobile computers from local vendor Itronix Corp. When users roam out of the Wi-Fi hot zone, they automatically switch to a cellular data network, using Itronix's iCare mobility software. Over time, the city wants to put Itronix systems in up to 1,250 police, fire and emergency services vehicles.

The hot zone cost between $50,000 and $75,000 to develop and deploy, according to Robin Toth, Spokane's economic development project manager. Spokane officials hope the Internet access capabilities will help attract businesses to the city, Toth said.

Rio Rancho, which is home to an Intel Corp. chip plant, also wants to use "cutting-edge technology" to lure new business, said city manager Jim Palenick. Intel helped evaluate bidders for the municipal network, Palenick said, and last month the city tapped Usurf America Inc. in Colorado Springs to build it under a contract that doesn't include any infrastructure costs. However, Rio Rancho will have to pay fees for data services.

Ken Upcraft, Usurf's president, said his company intends to blanket the city with a mesh Wi-Fi network that includes about 600 access points. Communications between city agencies will be handled over a firewalled network with 128-bit encryption, Upcraft added.

Cook County's public safety network plans are similar to those of New York City [QuickLink 47640]. County CIO Katherine Maras O'Leary said the network infrastructure will include about 150 access points.

Dudley Donelson, Cook County's deputy director of IT, said the access points, which should be installed by next year, will be mounted on 200-ft. towers to boost their range to three miles. 47787

Wi-Fi Hot Zones

LOCATION	TECHNOLOGY
Cook County, Ill. (940 square miles)	150 access points with fiber backhauls; rugged computers linked to Cisco mobile routers
Rio Rancho, N.M. (103 square miles)	600 access points in a mesh network, with a wireless backhaul between major mesh nodes
Spokane, Wash. (100 blocks)	Five 802.11b base stations with phased-array antennas; rugged computers

BRIEFS

Microsoft Plans OS For Clustering Apps

Microsoft Corp. said it's developing a version of Windows Server 2003 tailored for high-performance computing applications. The HPC Edition will integrate the operating system with cluster management software, a job scheduler and other tools, Microsoft said. A beta-test release should be available by year's end, and commercial shipments are expected to start in late 2005.

DOJ Concludes Its Case in Oracle Trial

The U.S. Department of Justice rested its case against Oracle Corp.'s proposed takeover of PeopleSoft Inc. R. Hewitt Pate, an assistant attorney general, said the DOJ provided "compelling" evidence that a takeover would be anticompetitive. But an SAP AG executive called as a witness by Oracle testified that officials at the ERP market leader "anticipate a greater amount of competitiveness" from Oracle if it succeeds in acquiring PeopleSoft.

Intel Readies Xeon With 64-bit Support

Intel Corp. today will introduce a Xeon processor that can run both 64- and 32-bit applications, sources told the IDG News Service. The device, code-named Nocona, is the first to incorporate Intel's set of 64-bit extensions to the x86 architecture. Advanced Micro Devices Inc. already offers similar functionality in its Opteron chip. An Intel spokesman declined to comment about Nocona.

Short Takes

SAP released a rapid deployment tool designed to speed up and simplify installations of its NetWeaver middleware technology. . . . **MICROSOFT** said it has been awarded a U.S. patent on technology for using the conductivity of the human body to link various portable devices.

[ON THE MARK]

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY GOSSIP BY MARK HALL

MATTHEW FAULKNER

Open-Source Apps Losing Desktop . . .

. . . battle with Microsoft Corp. In fact, one wonders whether there's been a skirmish at all. For more than two years, open-source advocates have been furiously throwing alternatives into the market to compete against the Windows/Office combo, with little or nothing to show for their efforts. OpenOffice and StarOffice have been the most notable attempts, the latter pushed hard by Sun Microsystems Inc. These office productivity tools run on Linux, of course, and, for all intents and purposes, have been free for the taking. Yet, despite some of the toughest, most cost-constrained years in IT history, "it's pretty hard to come up with data that shows any traction from these products," as Alan Yates, Microsoft's senior director for business strategy, carefully puts it. That's an understatement. How has Microsoft defended its desktop turf against freebie competitors? By focusing on cost, says Yates. "Given the focus of the entire business world on cost recently, it's natural for people to focus on low-cost alternatives," he says. "We ourselves position Office as having the lowest TCO on the market." Switching to open-source productivity tools would cost you plenty in new deployment fees, user training, file conversion and more. That's an argument that clearly resonates inside IT shops, or else they would have embraced open-source on the desktop much as they have on servers, where Linux, Apache, MySQL and other tools are giving Microsoft a run for its money. But Microsoft owns the desktop, and the open-source folks might as well give up the silly game.

Open-Source Server Management . . .

. . . becomes more critical as deployment spreads. With more big companies shifting apps to Linux servers, the need to manage those machines and their software stacks has become paramount. To the rescue comes Hyperic LLC in San Francisco, which ships Hyperic HQ to monitor and control the major open-source server tools, such as Apache, JBoss, Linux, MySQL and Tomcat. Mark Douglas, president of the 3-month-old company, says his 100% Java app, which is free for developers beginning this week, gives you everything from JDBC connection management between your database and application servers to end-to-end performance metrics between end users and Web servers. Currently, Hyperic HQ feeds alerts into its own browser-based console or into a Tivoli management system. But if you wanted those alerts aimed at BMC Patrol or HP OpenView, says Douglas, "we'd be happy to do it. It's not hard." Pricing is $65 per month per production machine.

17% Number of Fortune 1,000 firms moving apps to open-source, says Smith Barney.

Voice-Over-IP Spam Threat . . .

. . . is real, suggests Richard Tworek, CEO of Qovia Inc., a Frederick, Md.-based VoIP management firm. That's something you certainly didn't want to hear. But technically, it can be done, says Tworek. So, will the idea of VoIP spam deter you from deploying it? Not likely. Already, VoIP-ready private branch exchanges are outselling the old-fashioned kind because the appeal of avoiding toll charges and taking advantage of benefits like unified messaging services and simpler wiring layouts outweighs potential problems. Besides, Tworek claims, his company's VoIP Monitoring and Management System (VMMS) will be able to squelch spam if it ever becomes a problem. The VMMS already handles disaster recovery, path analysis, call quality and other management operations of traditional PBXs. Qovia's VMMS currently runs on Windows, but expect a Solaris-based version by year's end.

TWOREK says VoIP spam can be stopped.

OptimalJ Upgrade Eases Java . . .

. . . code testing for programmers. And that's a boost for companies creating enterprisewide applications using Java — the number of which Gartner Inc. predicts will grow 300% by 2008. According to Mike Burba, launch manager at Compuware Corp. in Detroit, the OptimalJ 3.2 release in mid-July will give programmers "model-driven testing, which simplifies their ability to generate test scripts for their code." The upgrade also adds a plug-in for the open-source Eclipse developer framework, includes complete application-analysis tools and adds support for the IBM Rational ClearCase source-control system, among other improvements. OptimalJ 3.2 comes in Developer, Professional and Architect editions.

Symantec Nails Non-English Spam . . .

. . . with Brightmail 6.0, which ships on June 30. With up to 20% of the world's spam targeting non-English speakers, Symantec Corp. in Cupertino, Calif., thinks global companies will like the latest release of its recently acquired technology that stops spam in 11 languages. They may also appreciate improvements to its suspect-source and safe-source IP list filters, message-blocking determined by attachment signatures, and significant upgrades to its management console, which is now fully browser-based. Pricing starts at $1,399 per year for 49 users. **47772**

100 Number of messages that Brightmail says it filters per month. 64% are spam.

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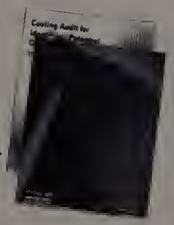

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☐ Cables/Wires ☐ Mobile Protection ☐ Surge Protection ☐ UPS Upgrade ☐ Don't know
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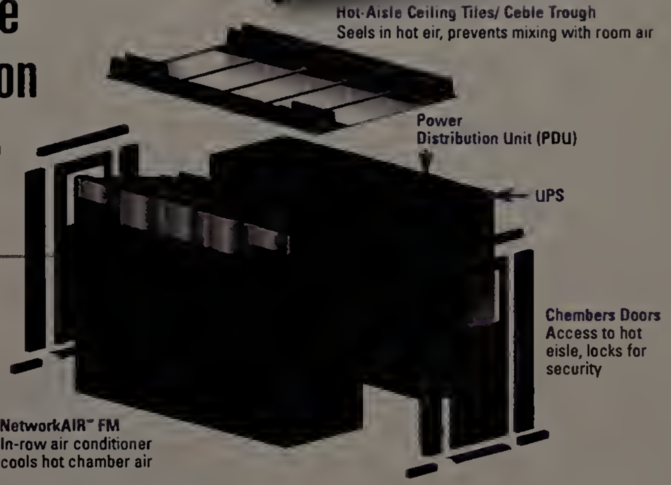
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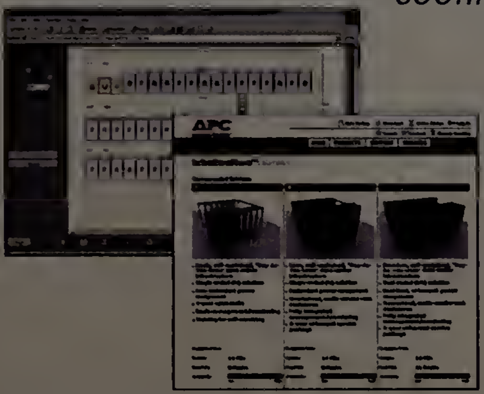

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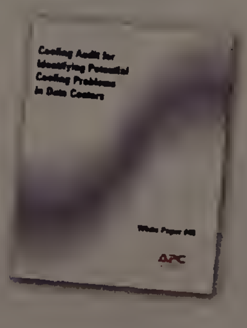

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Sun and BEA Push To Make Java Easy

JavaOne conference will showcase new offerings aimed at reducing complexity

BY CAROL SLIWA

DEVELOPERS at this week's JavaOne conference will get a chance to check the progress that tools vendors have made in their long quest to ease Java programming so they can better compete against Microsoft Corp.

For starters, conference sponsor Sun Microsystems Inc. will try to reassert itself as a major player with the release of Java Studio Creator. The visually oriented tool aims to "make it as easy to develop for the Java platform as Visual Basic makes it for Windows," according to Joe Keller, the company's vice president of Java Web services developer tools marketing.

But some developers may cast an eye toward a joint venture between BEA Systems Inc., Instantiations Inc. and the Eclipse Foundation, the nonprofit spin-off overseeing the open-source development framework that IBM created. The vendors will announce plans for an open-source incubator project, called Pollinate, to create Eclipse-based development tools that integrate with Apache Beehive, an application runtime framework BEA turned over to the open-source community.

"The big theme is bringing Java to the masses," said Mark Driver, an analyst at Gartner Inc. "Studio Creator and what BEA is doing with Beehive are targeted at bringing Java to the mortal man, making it more attractive to the corporate IT programmer versus the highly skilled systems programmers."

A beta version of Pollinate is due this fall under the Eclipse Public License. When it arrives, Eclipse users will get a chance to try BEA's Java Control architecture, a lightweight server-side component model that reduces the low-level plumbing code developers need to write.

"That sounds like a great idea," said Michael Reagin, the Portland, Ore.-based director of research and development at Providence Health System, which uses BEA's application server and Eclipse. "It certainly would support the vision of open-source, and I think it's going to be a positive for BEA and Java in general."

Reagin said the nonprofit organization looked at commercial offerings that required expensive, high-powered developer workstations and "didn't see a whole lot of value compared to Eclipse." Only 30% of Providence Health System's development work is done in Java, and it gravitated toward the freely available Eclipse integrated development environment, he said.

Dave Cotter, director of developer marketing at BEA, said that if a vendor creates a control today, it works only on BEA's WebLogic. But with Beehive, vendors could create controls for the Tomcat open-source application server or any J2EE-based application server that supports Beehive.

"Developers want to know that they can use the framework and not be locked into BEA's tools," said Driver. "The potential is that Beehive could become the de facto framework for high-productivity products — what we're calling the 'J2EZ space,' where time to market, low cost and productivity are driving factors."

Sun's J2EZ offering, Java Studio Creator, will be available only to Sun Developer Network subscribers. The $99 price includes a perpetual license to Java Studio Creator and one year of product updates, upgrades and access to premium content.

This week, Sun plans to release an early-access copy of its Java Studio Enterprise tool, which adds support for the Unified Modeling Language and application profiling.

Sun also plans to unveil the 4.0 release of its NetBeans application framework, which adds support for the creation of Enterprise JavaBeans and Web services and a project management system based on The Apache Software Foundation's Ant. Keller said NetBeans 4.0 could be out in late summer or early fall. **47784**

Java Tools Roundup

SUN: Launching Java Studio Creator tool; providing early-access versions of Java Studio Enterprise Version 2 and NetBeans 4.0; expanding Java.com site to include component marketplace.

BEA: Working with Eclipse Foundation and Instantiations on Eclipse-based development environment and tools for Apache Beehive, an application framework that BEA submitted to the Apache open-source project.

BORLAND: Adding Mac OS X support for Java tools; releasing new version of ServerTrace performance optimization tool.

IBM: Announced WebSphere Extended Deployment software this week to automatically adjust computing resources.

READ MORE ONLINE

An extended version of this story is available on our Web site:

QuickLink 47812
www.computerworld.com

Correction

IN LAST WEEK'S ISSUE, a story in the Technology section about Southwest Airlines Co.'s planned air-to-ground data communications system ("Data Takes Flight") incorrectly stated some frequencies in KHz. All of the frequencies should have been expressed in MHz. A corrected version of the story can be found on our Web site at QuickLink 47388.

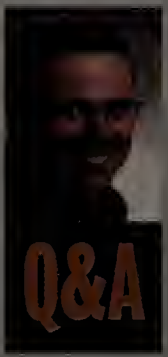
Eclipse Director Discusses 3.0 Development Platform

The Eclipse Foundation last week announced the launch of Version 3.0 of its open-source development platform – the first major release since the nonprofit group assumed oversight of the IBM-created technology.

One key new feature is a rich-client framework that will further transform Eclipse "from a platform for doing tools integration to a platform for doing application construction and integration," said **Mike Milinkovich**, the former Oracle Corp. vice president who became the group's executive director on June 1.

Another much-anticipated addition is the integration of Eclipse's Standard Widget Toolkit (SWT) and the Swing components endorsed by the Java Community Process (JCP) that Sun Microsystems created to evolve Java. SWT and Swing are used to build graphical user interfaces, and some vendors cried foul when IBM broke ranks from the JCP with its SWT. The technologies are being integrated for Windows and Linux.

Also this week, Eclipse is releasing new versions of its C and C++ development tools and its Hyades project for application optimization and verification. "Many people have the misperception that Eclipse is a Java IDE and that's all," Milinkovich said in an interview with *Computerworld.*



Can you provide more details about the rich-client platform? We've done a lot of work to refactor some of the basic frameworks within Eclipse to make them more generic so they can support any application, not just an IDE. In doing so, they've created a platform which developers working in, for example, enterprise IT shops can take these frameworks and build rich, highly functional desktop applications in Java which conform to the native platform look and feel of the underlying platform.

What's the next major area of focus for Eclipse? The top-level project is called Web tools. The two initial subprojects under that top-level project are called Web tooling and J2EE tooling. Web tooling is really addressing areas like HTML-based Web application development, XML, Web services and service-oriented architectures. The J2EE tooling is for doing server deployments and application construction in support of both servlet [Java Server Page]-style development and [Enterprise JavaBeans] development as well.

When do you expect the first release? In 2005, but there are going to be interim releases.

If you do your job well, won't you have a major effect on the commercial tools market? There's no doubt that Eclipse does and has and will be in the future affecting the commercial tools. But what we are trying to do is make open-source implementations of the basic tooling, which has been done over and over and over again, and thereby free commercial developers to go and add value in new and innovative ways.

– Carol Sliwa

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BRIEFS

AOL Follows Yahoo, Drops Corporate IM

America Online Inc. said it will drop its corporate instant messaging gateway software and offer to migrate users to a similar product from IMlogic Inc. AOL's move came just one business day after Yahoo Inc.'s June 18 announcement that its Yahoo Business Messenger service is being discontinued. AOL said it will continue to offer AIM Business Services, a set of instant messaging tools aimed directly at end users.

Sun Unit to Focus On Government IT

Sun Microsystems Inc. said it has formed a Global Government Office to focus on the IT needs of government agencies worldwide. The unit will be led by Clark Masters, an executive vice president who headed Sun's enterprise systems group until a recent reorganization. Masters was also named president of the Sun Microsystems Federal Inc. subsidiary.

CA Promotes R&D Exec, Hires Counsel

Computer Associates International Inc. named Mark Barrenechea executive vice president of software development, promoting him from senior vice president. CA also said it has hired a general counsel to fill a job that had been vacant since the previous head of legal affairs was fired in April. The company's accounting practices are being investigated by federal prosecutors and the Securities and Exchange Commission.

Short Takes

NOVELL INC. today plans to ship ZENworks 6.5, an upgrade of its systems management software that can centrally control networks of Linux-based servers and PCs. . . . **ORACLE CORP.** and **NETSUITE INC.** said they have ended a licensing deal that let NetSuite sell its hosted ERP applications under Oracle's name.

Cell Carriers Engage in High-Speed Data Race

Cingular, Sprint PCS, Verizon Wireless all promise faster mobile networks

BY BOB BREWIN

WIDESPREAD national coverage for high-speed cellular data services edged closer to reality last week, as Cingular Wireless and Sprint PCS Group separately announced plans to deploy new broadband networks over the next two years.

Cingular and Sprint PCS joined Verizon Wireless in aiming high-speed data offerings at IT managers who need to support increasingly mobile workforces. Verizon Wireless last week reaffirmed that it will offer high-speed capabilities in a third of its national network by year's end, keeping to a plan announced in January [QuickLink 43952].

Sprint PCS said it plans to roll out a data service with average speeds of 300K to 500Kbit/sec. and a peak rate of 2.4Mbit/sec. The service will be based on the cellular standard Code Division Multiple Access (CDMA) Evolution-Data Only (EV-DO), which is the same technology Verizon Wireless is using.

Coverage vs. Speed

For George Bishop, IT director at Xcel Pharmaceuticals Inc. in San Diego, wide geographic coverage is more important than superfast data rates. Xcel has equipped about 20 staffers with EV-DO data cards, but Bishop said Xcel chose Bedminster, N.J.-based Verizon Wireless as its cellular data carrier because it provides better coverage nationwide than its rivals.

He added, though, that he looks forward to Verizon Wireless extending the reach of its EV-DO service beyond test markets in San Diego and Washington. That will let Xcel's users in other parts of the country take advantage of the high-speed throughput to access e-mail and do research on the Internet, Bishop said.

Craig Mathias, an analyst at Farpoint Group in Ashland, Mass., said Sprint PCS announced its EV-DO plans in response to competitive pressure from Verizon Wireless. He added that the move marks an acceleration of the high-speed data plan that Sprint PCS had announced previously, plus a shift in technology.

Last July, Sprint PCS signed a $1 billion deal with Lucent Technologies Inc. for network hardware designed to support CDMA Evolution-Data Voice (EV-DV) technology. Overland Park, Kan.-based Sprint PCS last week said future upgrades of its network will include EV-DV after equipment supporting the technology becomes available, likely in 2006.

Atlanta-based Cingular Wireless said it has issued a request for proposals to networking equipment vendors looking to support its advanced data services, which will be based on the Universal Mobile Telecommunications System standard. Hamish Caldwell, an executive at Cingular, said the company plans to test a UMTS network this summer in Atlanta.

UMTS has an average throughput of 384Kbit/sec. But Cingular also plans to deploy an enhanced version called High Speed Downlink Packet Access, with data rates of up to 14.4Mbit/sec.

After Cingular completes its acquisition of AT&T Wireless Services Inc. later this year, it could also take advantage of UMTS installations planned by that company, Caldwell said. 47780

New Cellular Network Plans

CINGULAR WIRELESS

Plans trial of a UMTS network in Atlanta this summer, with possible nationwide rollout next year.

SPRINT PCS

Will launch a CDMA EV-DO network in select markets this year and extend it to most large U.S. metropolitan areas in 2005.

VERIZON WIRELESS

Now offers services based on CDMA EV-DO in Washington and San Diego; will extend to one-third of its network by year's end.

First Online Data Privacy Law Looms in California

Most companies already set for AB 68, experts say

BY JAIKUMAR VIJAYAN

The nation's first privacy law that specifically targets online businesses will go into effect in California on July 1. But it's unlikely to cause many problems for companies, because most of the privacy requirements stipulated by the law are already in place at commercial Web sites.

The Online Privacy Act of 2003 (Calif. AB 68) was authored by Joseph Simitian, a member of the California State Assembly. Under the law, any online business that collects personally identifiable information from California residents is required to take steps such as posting its privacy policy and notifying consumers about what kinds of data will be gathered and how it will be used.

The law is structured so that anyone can bring an "individual course of action" against companies that fail to comply, Simitian said.

The AB 68 legislation formalizes what most online businesses have been doing for some time anyway, said Christopher Pierson, a partner at Lewis and Roca LLP, a law firm in Phoenix. Previously, consumers had to take action such as filing a complaint with the Federal Trade Commission or suing a company under unfair business practice laws to address an online privacy breach, Pierson said.

From an IT standpoint, there is little that companies have to change.

"Most companies doing business on the Web have privacy statements," said Kirk Herath, chief privacy officer at Nationwide Mutual Insurance Co. in Columbus, Ohio. "They just need to make sure that their old statements contain all of the elements of the new requirements."

Not as Threatening

The bill isn't as "threatening" as other California privacy laws, such as the SB 1386 Database Breach Notification Act and the pending SB 1279 measure that toughens the scope of SB 1386, said a user at a financial services company who requested anonymity.

Part of the reason may be that the original bill had been watered down quite a bit before being passed, he said.

According to Simitian, there was heavy industry opposition to some of the bill's initial provisions. The strongest objections were over a provision that required companies to maintain a history of their privacy policies, he said. 47745

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Offshore, U.S. IT Services Firms Go Head-to-Head

Growing competition could result in lower costs, better service for users

BY PATRICK THIBODEAU
NEW YORK

Rapidly growing IT services firms based in India are adding sophisticated consulting services in an effort to compete directly with the major IT consulting firms. At the same time, U.S.-based providers are expanding their offshore operations to cut costs.

"There is no doubt that the race is on," said Stephen Pratt, head of Infosys Consulting Inc., which was formed in April by India-based Infosys Technologies Ltd. "It's no secret that the winning model will be high-end business consulting combined with high-quality, low-cost technology delivery done offshore."

For users of these services, the twin developments likely will mean increased competition — and potentially better pricing — as offshore development becomes a standard part of any outsourcing offering by U.S.-based companies.

Cost Considerations

Increasingly, the decision about which vendor to use "comes down to cost," said Don Weiner, managing director and global head of technology at Deutsche Bank in New York. "Let competition dictate who gets the business," said Weiner, in response to a reporter's question at a conference on how emerging trends may shape the offshore IT market. The event was sponsored by the Information Technology Association of America and Nasdaq Stock Market Inc.

Weiner said he takes the view that cost is the key factor because his company uses an Indian firm only for commodity IT services, such as application maintenance, while retaining all the subject matter, architecture, design and project management expertise. But he added that he expects providers in India to gain increased IT skills, which should help them improve the level of services they can deliver to users.

Pratt said the Infosys Consulting unit now has 150 employees in the U.S. and would like to expand that number to 500 within three years. However, India-based workers who provide everything from technical expertise to competitive analysis for clients will do a large part of the work, and Pratt said he sees Infosys' ability to leverage the low costs of offshore work as a key advantage for his company.

But the move by U.S.-based IT and business consulting firms to expand their offshore operations may help level the playing field. For instance, IBM in April announced plans to buy India-based Daksh eServices Pvt., a 6,000-employee firm that does business process outsourcing work.

The differences between domestic and offshore IT services firms are blurring, said Stan Lepeak, an analyst at Meta Group Inc. The decision for users now "is not whether I should be onshore or offshore," Lepeak said. "It's what firm has the best capabilities."

But both U.S. services firms and companies based in India "have big transition risks," said Gregory Gould, an analyst at Goldman Sachs & Co. in New York. Domestic firms face a "very traumatic" restructuring as they boost the amount of work they do offshore, he noted, while the move by offshore firms into more complex lines of business is fraught with the potential for failure. 47786

H-1B Increase Faces Stiff Resistance

The political attack against offshoring isn't letting up. Bills that could restrict offshore IT work have been introduced in 37 states, and efforts to increase the federal H-1B visa cap aren't making headway.

Phil Bond, undersecretary for technology at the U.S. Department of Commerce, last week said H-1B supporters must make a strong case for an increase, particularly in light of the record levels of unemployment engineers are facing. "The need is going to have to be real," Bond said at last week's ITAA/Nasdaq conference.

This year's cap of 65,000 visas was reached in February, and companies have already begun submitting applications for the fiscal year that begins Oct. 1. High-tech companies are urging passage of a bill introduced by U.S. Rep. Lamar Smith (R-Texas) that could boost the cap by 20,000 visas by exempting U.S. university graduates with a master's degree or higher from the limits.

"In this atmosphere, doing anything on immigration is difficult," said Lynn Shotwell, director of government relations at the American Council on International Personnel, which backs Smith's bill. Shotwell said many companies planned ahead and were able to meet their H-1B needs for the current fiscal year. But, she added, "next year might be a different situation."

– Patrick Thibodeau

Sarb-Ox Projects Still Lack IT Involvement, Auditors Say

BY THOMAS HOFFMAN
IRVING, TEXAS

For many of the attendees at a Sarbanes-Oxley Act compliance conference held here this month, getting technology managers and staffers involved in the process of documenting internal IT controls is turning out to be a big challenge.

In an informal poll, roughly half of the 250 or so attendees indicated via a show of hands that their IT departments have been reluctant to help corporate auditors document IT controls in order to meet the Section 404 requirements of the financial-reporting law.

Some auditors who were at the conference, which was organized by the Rolling Meadows, Ill.-based Information Systems Audit and Control Association (ISACA), cited an inability or unwillingness on the part of IT staffers to step away from managing day-to-day technology operations.

"Our IT staff just doesn't want any part of our controls documentation work," said an IT auditor at a large retailer that's based in the Northeast. The auditor, who asked not to be identified, added that workers in the company's IT department claim to be "too busy putting out fires" to help with Section 404 documentation.

Other attendees said IT professionals often lack an understanding of auditing procedures and concepts such as application controls. "A lot of IT people struggle with these terms because they're audit-centric terms," noted Paul Zonneveld, a senior manager at Deloitte & Touche LLP's enterprise risk services consulting practice in Calgary, Alberta.

Marathon Oil Corp. encountered that problem last summer. When the Houston-based energy services company began documenting its financial controls, the IT department tried to develop its own controls framework. But that approach "didn't quite cut it" because the IT group didn't have a firm grasp of control objectives, said Barbara Brooks, manager of accounting controls at Marathon.

With the help of Marathon's accounting group and Deloitte & Touche, the IT department was able to develop a controls template based on the ISACA's COBIT methodology last October, added Brooks.

Rich Russell, director of application development at Herman Miller Inc., said he and other IT staffers at the Zeeland, Mich., maker of office furniture have been helping its audit department identify and document IT controls since the fourth quarter of last year. "I don't see how IT can't be involved," he said. "Not being actively involved is really putting the organization at risk."

Refusing to assist with documentation work could also have dire consequences for some IT executives. Such a refusal played a role when one CIO lost his job last year, said an audit manager who requested anonymity. The manager said the CIO was pressured into resigning, in part "because IT had a number of outstanding audit issues and he wasn't willing to address them, claiming the IT department was too busy." 47728

IT Managers Should . . .

IMPROVE their knowledge of internal system controls and auditing procedures.

MAKE SURE they understand their company's Sarbanes-Oxley compliance plan.

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Continued from page 1

CISSP

time when companies are increasingly being asked by their boards of directors and by auditors and regulators to prove that they have done due diligence on all matters related to IT security — including the hiring of security managers and other IT staffers.

The American National Standards Institute, the U.S. representative to the Geneva-based ISO, announced that the standards bodies are granting certificate accreditation to the Certified Information Systems Security Professional credential. Roy Swift, an ANSI program director, said CISSP is the first IT certification to be accredited under ISO/IEC 17024, a global benchmark for workers in various professions.

The accreditation will hopefully give CISSP a shot in the arm, said Christofer Hoff, director of enterprise security services at Western Corporate Federal Credit Union, a San Dimas, Calif.-based company with $25 billion in assets. "While broadly accepted as a benchmark credential, it's still viewed in some circles as being somewhat soft in the certification process," he added.

In fact, most IT certification programs "are often under fire for being too lenient and not reflecting the actual skills of the person," said Andrew Plato, president of Anitian Corp., a network security consulting firm and systems integrator in Beaverton, Ore. "The ISO accreditation will likely help dispel notions that the CISSP certification is meaningless."

'A Positive Step'

The CISSP credential is awarded by International Information Systems Security Certification Consortium Inc., a nonprofit organization in Vienna, Va., known informally as (ISC)^2. Although it's just one of several similar certifications (see chart), CISSP is considered the most popular. More than 27,000 IT security workers have earned the certification so far, according to (ISC)^2.

Other Certifications

Certified Information Security Manager (CISM) and Certified Information Systems Auditor (CISA): Offered by ISACA

Global Information Assurance Certification (GIAC): Offered by the SANS Institute

TruSecure ICSA Certified Security Associate (TICSA): Offered by TruSecure Corp.

The ISO's accreditation of CISSP should lessen some of the uncertainty that now exists for IT managers because of the competing certification programs, said Kim Milford, information security manager in the IT department at the University of Wisconsin-Madison.

"It's made hiring more confusing at times, as we need to weigh the strengths of different certifications against each other," Milford said. The university now plans to require security professionals to have CISSP credentials in order to qualify for senior positions, she added.

David Stacey, global IT security director at St. Jude Medical Inc. in St. Paul, Minn., already requires a CISSP certificate for any senior security position at the $1.6 billion maker of cardiovascular equipment. Stacey said the ISO's official recognition of the certification program is a positive step, given the growing importance of IT security to companies like his.

> **"The ISO accreditation will likely help dispel notions that the CISSP certification is meaningless.**
>
> **ANDREW PLATO**, PRESIDENT, ANITIAN CORP.

"Security is now a business enabler, and security leaders need to be better trained, more experienced and more business-savvy," Stacey said. "The CISSP is a good metric of that leadership ability."

However, Swift said other organizations that offer IT security certifications have also applied to the ISO for accreditation. "There's a strong demand for third-party review of these certifications to reassure the consumer and the government that the people who have these certifications do have the knowledge and skills they say they have," he added.

Alan Paller, director of research at the SANS Institute in Bethesda, Md., said his organization is seeking accreditation for its IT security certification program. The Information Systems Audit and Control Association in Rolling Meadows, Ill., has filed similar applications for separate certifications it offers to IT security managers and auditors.

To qualify for CISSP certification, security professionals need to have either four years of work experience or a three-year college degree in a related field, said James Duffy, executive director of (ISC)^2. They must also pass a six-hour exam designed to test their knowledge of technology and business issues related to information security.

Swift said the accreditation was granted after a review of (ISC)^2's policies and procedures, including those for testing, maintaining, reviewing and withdrawing certification. The test itself was also reviewed to ensure that the questions are relevant to the skills being assessed, he said. **47779**

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Continued from page 1

PeopleSoft

they don't fully understand how PeopleSoft's pricing works and said that their sales representatives don't appear to be empowered to negotiate with them. They also voiced fears that they will be penalized if they don't shift to the PeopleSoft model right away, describing a purported policy that could mean 10% cost increases per quarter for users who remain on the J.D. Edwards pricing plan.

That would amount to a "forced march" for J.D. Edwards users to PeopleSoft's licensing scheme, said Fredrick Pond, director of information services at Schnitzer Steel Industries Inc. in Portland, Ore. Pond moderated the forum at the conference, which was held by the independent Quest International User Group.

Schnitzer runs the EnterpriseOne financial applications and has been approached by PeopleSoft about switching to its pricing model, which is based on a customer's annual revenue. But Pond said that he hasn't yet adopted PeopleSoft's model and that doing so would increase Schnitzer's annual software maintenance fees by about 25%. "I have no ROI for this," he said.

Getting information from PeopleSoft about pricing and the so-called contract-fusion program aimed at getting J.D. Edwards users to change pricing methodologies has been a frustrating process, Pond added. He said that from what he has been told by other users, individual PeopleSoft sales representatives have taken different approaches to negotiations. "I can't figure out any rhyme or reason to it," Pond said.

'A Hard Message'

The Weitz Co., a construction firm in Des Moines that this year will see revenue of more than $1 billion, faces a 30% increase in licensing costs if it switches to PeopleSoft's pricing model, said CIO Mark Federle. Like Pond, Federle said he hasn't agreed to the change yet.

But the possibility that PeopleSoft may charge holdouts a 10% quarterly increase is "a hard message" for the J.D. Edwards user base, said Federle, who added that such an approach "has the strong potential of creating a bad feeling." Despite those concerns, he said he expects the vendor to let users keep their existing licensing if they wish to do so.

In a statement sent via e-mail, PeopleSoft said it "is committed to customer choice. Customers are able to choose the pricing model that best fits their needs and business." No J.D. Edwards users will be required to shift from user-based pricing to the enterprise licensing approach, the company added. PeopleSoft declined to make any officials available for an interview about the pricing issues.

Joshua Greenbaum, an analyst at Enterprise Applications Consulting in Berkeley, Calif., said the unhappiness and concerns about increased costs voiced by users at the Quest conference are "a problem that needs to be resolved" by PeopleSoft.

"At a minimum, PeopleSoft needs to educate its customers about the specifics of licensing and its sales force about how to better explain why it appears that prices are going up without a concomitant increase in value," Greenbaum added.

William Gabby, North American operations manager at Cargill Inc.'s Global Financial Solutions unit in Minnetonka, Minn., didn't attend the conference. But Gabby, whose unit is a J.D. Edwards user, said he also has concerns about PeopleSoft's approach to software licensing. "Pricing definitely has been the most challenging philosophical difference between the former two companies," he said. "We're still working through this area." **47778**

ADDITIONAL CONCERNS

Quest members said they're also wrestling with sales force and support issues:

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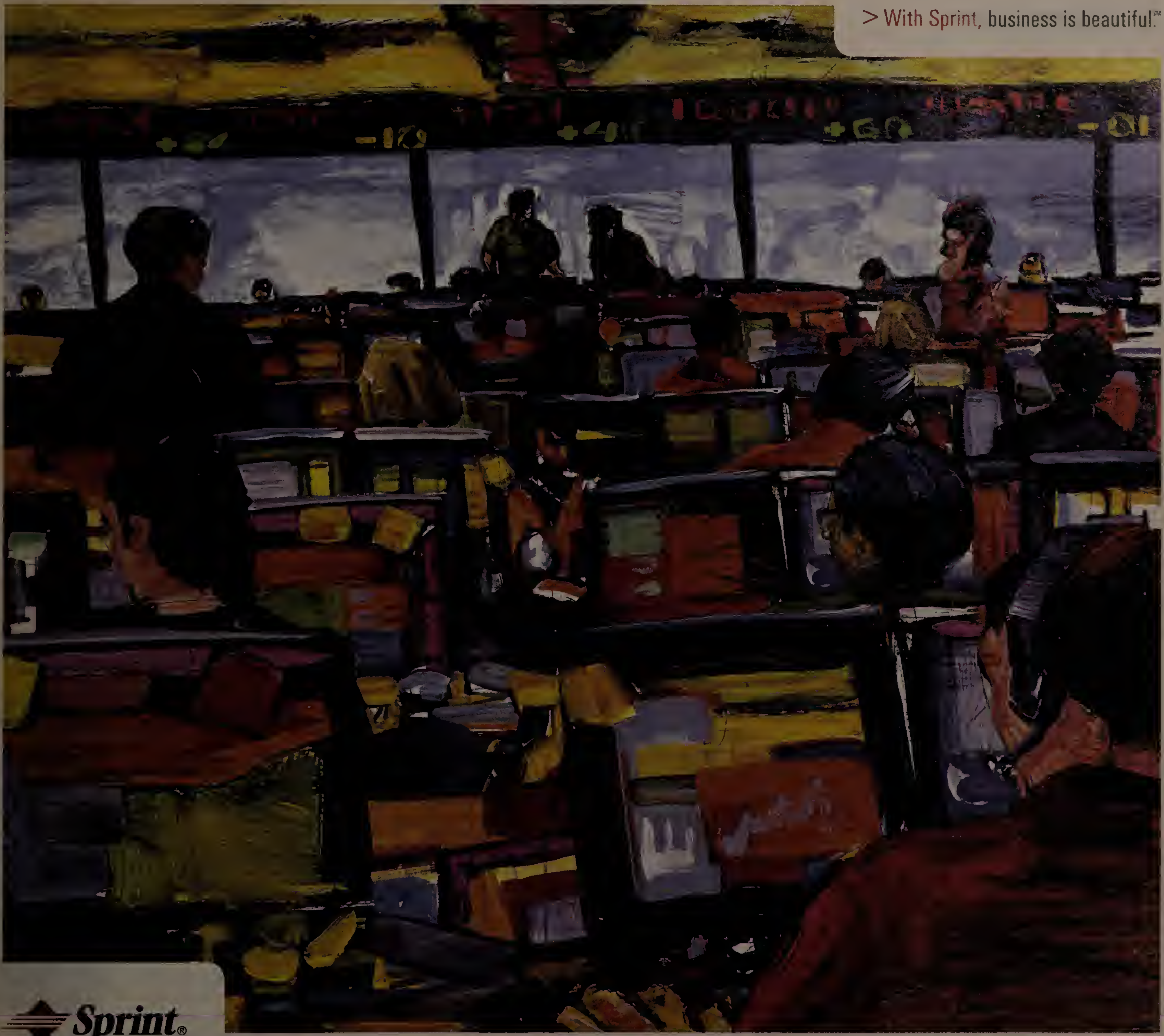
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MARK HALL

Secrecy Eating at Apple

THREE AND A HALF years ago in this space I wrote, "Today, there's no reason for IT managers to consider the Mac in their product plans, which is appropriate since Apple doesn't think of them either."

MARK HALL is a *Computerworld* editor at large. Contact him at mark_hall@computerworld.com.

I was wrong.

The truth today is far different. Apple Computer's technology is not just a credible choice for corporate IT. It's often the most cost-effective and best-performing option. You just don't know it because, in some measure, analysts and journalists covering enterprise computing wrote off Apple a long time ago.

Consider the following exercise: Visit *Computerworld.com* and type "OS X" into our search engine. As of last week, that would have turned up 340 hits. One of our competitors, *InformationWeek.com*, delivers a paltry 64. A query for "Windows XP," a newer operating system than Mac OS X, yields 871 results on our site; our competition gets you a mere 374. A search on "Linux" provides 3,222 and 1,549 hits, respectively. What this tells me (besides that *Computerworld* has vastly better coverage than the other guys) is that IT journalists tend to overlook Apple's technology.

Many CIOs subscribe to analyst firms' research to get the lowdown on vendors' technology in order to make informed choices about how one company's products will fit into their overall IT plans. You've got a cornucopia of options for in-depth analysis on Hewlett-Packard, IBM, Microsoft and Sun Microsystems, but precious little strategic analysis on Apple and its offerings.

But yammering reporters and analysts aren't the only ones to blame for a lack of IT-related coverage of Apple. Fingers must also be pointed at 1 Infinity Loop, the company's Cupertino, Calif., headquarters. Like its pretentious address, Apple's haughty attitude simply annoys people. Microsoft has never been known for its modesty either and can certainly be irksome. But it will bend over backward to get you product information, particularly about future plans. So much so, it's considered the world leader in FUD — the fear, uncertainty and doubt it inspires throughout the industry as it details what's on its drawing boards is more than enough to make IT managers hesitate before moving to another vendor's technology. But one IT manager's FUD is another's strategic planning tool.

Apple, in contrast, has mastered the art of FAPP — forget Apple for product planning. The company's "loose lips sink ships" attitude works well for its consumer market, where preannouncing a cool new gadget can kill the sales of your suddenly has-been widget. But in the serious world of corporate IT, CIOs seldom make infrastructure investments without a deep understanding of a vendor's long-term strategy. And Apple refuses to reveal much, if anything, about its plans.

That's a real shame, because with the Xserve, Apple is delivering one of the most powerful, low-cost, easy-to-manage Unix servers on the market. But you probably don't have any in your shop because when Apple announced the Xserve in 2002, you really didn't know how committed the company was to the product line, since it refused to talk futures. And you certainly didn't know about the 50 advanced management features it'll ship for them next month. Combined with Apple's no-client licensing fees, easy-to-run Xserves would have been the best-performing, lowest-TCO machines in your data center. But you didn't know that, so you bought more Linux, Solaris or Windows systems instead.

Certainly, the IT media's indifference to Apple has hurt the company's standing with CIOs. But Apple's obsession with secrecy has diminished it and IT's technology options even more. **47741**

Maryfran Johnson is on vacation. Her column will return in the July 12 issue.

WE WOULD HAVE ASKED YOU TO E-MAIL YOUR COMPLAINTS ABOUT SOFTWARE PIRACY AND TRADE BARRIERS, BUT WE WERE WORRIED ABOUT THE SECURITY OF OUR SYSTEMS.
SENATE
IT CEOs
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DAVID MOSCHELLA

Why Business Leaders Ignore You . . .

YOU'VE surely heard these complaints many times before: Too often, IT people speak in impenetrable jargon, love technology for its own sake and aren't grounded in what really matters to the business. While these characterizations may be stereotypes, they're not totally unfair.

But the other half of the story isn't heard nearly as often. Business people need to be much more fluent in IT. The reality is that whether business leaders are in sales, marketing, product development, customer service, finance or just about any other company function, they need to have a well-grounded sense of what IT can and cannot do, and this requires some actual knowledge. Unfortunately, many business people simply don't have enough of it.

DAV[illegible] a C[illegible] A[illegible] a C[illegible] Corp. [illegible] Co[illegible] dmosc[illegible]

IT people often get the blame for the lack of strategic IT alignment, for projects that don't meet real business needs and for the vast cultural divide that can exist between the IT organization and the rest of the company. But in my experience, business people are at least equally at fault, and often more so. In many companies, the underlying culture is one in which business leaders can get away with ignoring what's going on in IT.

The reasons for this are pretty clear. Working life is already tough enough, and for most people, learning about complex IT systems isn't exactly easy or fun. In addition, IT systems can take many employees, especially executives, out of their comfort zones and expose gaps in their skills and knowledge that many of them don't want to acknowledge. It's much easier to just believe, for example, that determining the way IT applications should be structured or managing the inevitable trade-offs between IT cost and functionality are really just problems for the IT group.

Business people can get away with this nonsense because in most companies, they shape the company culture and have most of the actual decision-making votes. Consequently, if a company culture emerges where most forms of IT complexity are instinctively viewed as an IT problem, there's often not much that the IT department can do. IT management lacks the authority to overcome what can amount to an unspoken conspiracy in which business people essentially say to one another, "I won't get too involved in this IT stuff if you don't."

These underlying attitudes explain why so many executives found Nicholas Carr's "IT Doesn't Matter" stuff so irresistible. It's exactly what they wanted to hear, because it reinforced their subconscious wish to be able to shun any real responsibility for IT decision-making. If IT doesn't matter, then why should I bother to learn about it?

Of course, this is all just a form of denial. In most companies, IT matters more than ever, and business leaders usually can't do their jobs without a deep understanding of what's going on in IT. If more CEOs would simply stand up and demand such knowledge, the jobs of IT professionals would get easier and, more importantly, companies would have a much better chance of showing why IT really matters after all. **47659**

VIRGINIA ROBBINS

. . . And Networkers Ignore Them

MY FRIEND and I shielded our eyes from the setting sun as we waited for the graduation ceremony for the University of California, Berkeley's Haas School of Business to begin. She had just returned from six months in a new position as a COO in Hawaii, and I was interested in what life was like in paradise. After covering the standard topics — air conditioning (not used by the natives), flowers (stunning) and gas prices (lower than in San Francisco), she asked me if I had read "IT Doesn't Matter."

Yes, I had read the *Harvard Business Review* article. Moreover, it felt as if every technology publication had run an editorial, commentary or other critique of the piece with the same basic response: IT *does* matter, because the technical leadership required for success is not yet a commodity.

VIRGINIA ROBBINS is CIO and managing director at Chela Education Financing in San Francisco. Contact her at **VRobbins@chelafin.org**.

My friend turned toward me, threw up her hands and fervently agreed. Her company was small but had a network spread across multiple locations. To her, it seemed impossible to find and retain a good business-focused technology manager. She had tried a number of consultants, and every one of them was primarily interested in selling her hardware. The staffers that she had managed to retain were the relatives of key customers, and while they did know a great deal about the business, they seemed to have a difficult time keeping the e-mail servers virus-free and the consultant fees to a level that she felt was affordable.

I wished her luck.

Of all the various tech managers, the group that always seems to pride themselves in not understanding the business is networking managers. Kind, sensitive, business-savvy help desk managers, upon earning their MCSEs, morph overnight into arrogant, "it works on my equipment," technocratic despots.

OK, before you start e-mailing me, not all of them make this transition. But even I did for a while, until I saw the error of my ways.

With the sun still in her eyes, my friend turned to speak to our hosts and I began to wonder why this happened — why do so many good network managers appear to lose their business savvy? Maybe it's all that time spent patching servers, scanning TechNet and battling spam only to find out that they have accidentally blocked key e-mails from a new client at the law firm of Abreast, Skin and Hambrixxx. Or maybe it's because they have received one more hastily approved security request to add 27 temporary employees to the network today, only to have the project canceled and the temps sent home by noon.

I hope that as CIO I never have to ask my networking managers to do anything that I wouldn't do. I hope that I am able to encourage them to continue learning how and why our business makes money. Moreover, I realize that I need to make sure that in between the patches and security requests, I include my network managers in the same business briefings as the development managers. **47663**

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READERS' LETTERS

Counting the Vote

THE call for voter-verifiable paper receipts is playing on the fears of people who don't understand technical issues and want to hold something in their hands before they will believe that it is real or accurate ["50M Electronic Votes Could Be Insecure, Say Researchers," QuickLink 46750]. As someone who has witnessed the validation of paper voting rolls, I can tell you that paper is cumbersome and no panacea.

One potential solution would be to have two separate systems operating on two different operating systems and hard-cabled together with a serial communications link. One system would record the vote in the booth on its internal system and communicate the result to the second system, which would record the result on independent WORM media after being verified by the voter. The two machines' results could be easily compared after the polls closed. The two systems could be made by different vendors, which would take care of the argument that one company can't be trusted to record the votes accurately.

Chuck Ballard
Senior engineer, Allentown, Pa., chballard@mailblocks.com

AS A COMPUTER security professional actively involved in the e-voting (or "direct recording electronic voting") controversy, I read the article "ITAA Blasts E-voting Critic, Calls Testimony 'Misleading' " [QuickLink 46763] with great interest. I was disappointed in ITAA President Harris Miller's statements regarding the analysis of professor Avi Rubin of Johns Hopkins University. It is not only Rubin but also hundreds of other computer security and computer science professionals who have grave doubts about the security of DREs. In fact, almost 2,000 technologists have signed a petition sponsored by professor David Dill of Stanford University calling for voter-verified paper audit trails. The signatories, who can be found at *www.verifiedvoting.org*, are united in their understanding that software is insufficiently reliable for use in voting applications.

Opposition to paperless DREs is a bipartisan issue. Where I live, in Fairfax County, Va., we use AVS WinVote DREs. My analysis of the WinVote systems last summer found many problems similar to those identified by Rubin in the Diebold systems in Maryland. A failure in the WinVote systems last November left the results of a Fairfax County election questionable when a Republican candidate lost by a margin of about 1% in an election where approximately 2% of the votes may have been recorded incorrectly. As a result, Republican officials who had previously perceived this to be a Democratic issue changed their tune, and some are filing lawsuits seeking to force states and localities to move away from paperless DREs. Miller would be well advised to understand the issues rather than resort to ad hominem attacks on Rubin. If pointing out the obvious is yelling "Fire!" (as Miller accuses Rubin of doing), then all voters should be yelling "Fire!" at the top of their lungs.

Jeremy Epstein
Senior director, product security, webMethods Inc., Fairfax, Va., jepstein@webMethods.com

Code Theft No Issue

WE IN THE IT industry have been led astray by the innumerable security holes in Microsoft's operating systems. We start confusing knowledge with instability. Linux and the BSD Unix variants all have the source code open to the public. They are no less stable than Microsoft because of that. A system that is well set up and configured will be stable and secure. A sloppy Linux configuration will be full of holes. The same is true of Cisco IOS implementations.

When set up correctly with access lists and firewalls out to the Internet, network backbone components are terrifically stable and reliable. With a sloppy, straight-out-of-the-box configuration, the user will deservedly have security and stability issues. There's no magic in Cisco IOS; it's just a well-written, complex and well-supported tool. The theft of IOS source code is a commercial concern for Cisco. Another company could attempt to gain competitive advantage by using Cisco research as it appears in the source code to augment its own operating system for routers or switches. The sky is not falling, and your editorial cartoon in the May 31 issue would be more appropriate in an internal Cisco publication. The same is true for all the articles and discussion concerning the source code theft.

Dick Heyman
Network engineer,
city of Fort Collins, Colo.

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EMERGING TECHNOLOGIES

Progress Report

These **four emerging technologies** made a big splash when they gained attention two years ago. Have they finally arrived?

By Robert L. Mitchell

THE TABLET PC
The HP Compaq Tablet PC TC100's detachable keyboard adds versatility, but most tablet PCs are still used in specialized niche markets such as health care and insurance.

WHILE TECHNOLOGIES CONTINUALLY emerge to take aim at enterprise adoption, few become a significant part of the corporate IT infrastructure. With that in mind, we thought it was time to check in on some of the technologies we had spotlighted in past Emerging Technologies features.

Since their introduction, tablet PCs, InfiniBand, server blades and iSCSI have seen their stock rise and fall as each has evolved. Tablet PCs were once touted by vendors as eventual replacements for general-purpose notebooks, but so far they've mainly been used as replacements for proprietary slate devices in vertical markets. And InfiniBand is finally finding a niche in high-performance server clusters. But server blades, which are rapidly moving into the mainstream, may prove to be the biggest success. And iSCSI isn't far behind, as it ushers in an era of low-cost, departmental storage-area networks (SAN). Here's a closer look at how each has fared so far.

Tablet PC Awaits Horizontal Leap

While General Motors Corp. and other large companies have piloted tablet PCs as a notebook replacement for general-purpose computing, most tablet PCs sold to date have been deployed in forms-based, vertical market applications, where they often replace proprietary systems. Market research company IDC estimates that tablet PC shipments last year totaled 415,000 units, compared with more than 24 million traditional notebooks.

"The first generation really wasn't ready for widespread deployment," says Tony Scott, chief technology officer at GM, citing problems with digitizer resolution, battery life and the maturity of Microsoft Corp.'s Tablet PC software.

A second pilot of HP Compaq Tablet PCs is now under way at GM, and Scott says the hardware has gotten much better. Although pen accuracy and overall system performance have improved, he says, the two-hour battery life is still inadequate.

On the software side, Windows XP Tablet Edition 2005, scheduled to ship with Windows XP Service Pack 2 later this summer, should smoothen some of the rough edges. "Pen support was grafted onto the side of [Windows XP] rather than a major change to the internal structure," says Dan Kusnetsky, an analyst at IDC in Framingham, Mass. The next version will "integrate ink capability more tightly" with the operating system, he says.

IDC expects strong growth in tablet PCs, with unit sales doubling this year and passing 20 million by 2008. More than half of those are expected to be hybrid units that include a keyboard as opposed to pen-only slate designs. But outside of vertical niches, users may be reluctant to pay the $150 to $200 premium that tablet PCs currently carry over traditional notebooks — an amount that quickly adds up if you're buying hundreds of units. Says Scott, "I don't see it replacing the standard laptop for everybody in the next couple of years."

Continued on page 26

SHORTLIST
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Scaled-Back Expectations for InfiniBand

InfiniBand was going to be the universal I/O interconnect to everything in the data center, including network, storage and server-to-server communications. Vendors proclaimed that a single, low-latency, high-speed InfiniBand connection on each server, linked through a "fabric" of switches, would eliminate the need for separate Fibre Channel or Ethernet adapters and associated cabling within and across racks of servers. That vision has yet to become reality. "Support for storage attachments has been slow at best. Support for network communication equipment attachments is virtually nonexistent," says John Enck, an analyst at Gartner Inc. in Stamford, Conn.

But after a few false starts, InfiniBand has found a home as an alternative for server-to-server communication in clusters that are used for high-performance computing and high-end database applications. InfiniBand's very low latency makes it superior to Ethernet for this purpose, and its high speed — currently 10Gbit/sec., with 30Gbit/sec. on the way — surpasses the performance of Ethernet and other high-performance computing switched fabrics, such as the 2Gbit/sec. Myrinet. Several vendors, including IBM, Dell Inc. and Hewlett-Packard Co., have added InfiniBand to their cluster server offerings, and RLX Technologies Inc. in The Woodlands, Texas, has announced support for InfiniBand on server blades.

As the cost of 10Gbit/sec. Ethernet continues to fall, InfiniBand may face increasing competition, especially for less-demanding cluster computing applications. Two technologies could reduce Ethernet's latency and processor overhead: TCP offload engines (ToE), which speed processing of TCP packets, and Remote Direct Memory Access, a protocol used in InfiniBand to improve performance by allowing direct memory-to-memory transfers between servers.

INFINIBAND'S LATENCY EDGE

InfiniBand's low end-to-end latency characteristics compare well with alternatives for interconnecting high-performance compute clusters.

	BANDWIDTH	LATENCY
InfiniBand	10Gbit/sec.	7.6 us
Myrinet	2Gbit/sec.	8 us
Gigabit Ethernet	1Gbit/sec.	60 us*

*End-to-end latency, 8-byte packet

SOURCE: DHABALESWAR K. PANDA, OHIO STATE UNIVERSITY STUDY, JANUARY 2003, AS CITED IN WHITE PAPER PROVIDED BY INFINIBAND SWITCH VENDOR VOLTAIRE INC.

"We're not looking at InfiniBand as the only thing we're going to do going forward," says Steve Woods, systems engineer at MCNC, a nonprofit research corporation in Research Triangle Park, N.C., that's testing InfiniBand in grid clusters. For now, InfiniBand has the advantage over Ethernet. But, says Enck, "we still view the race between InfiniBand and higher-speed Ethernet as too close to call."

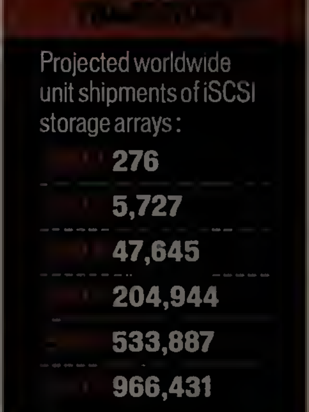
iSCSI Networked Storage Soars After Slow Start

After a slow start two years ago, the Internet Small Computer Systems Interface (iSCSI) protocol is beginning to push SANs down from the glass-house data center to departmental servers. The relatively low cost of IP SANs caused demand for iSCSI storage arrays to outstrip supply last year, according to IDC. In a recent IDC survey of 300 corporate buyers, 67% of respondents said they were receptive to buying iSCSI. And the research firm expects iSCSI storage systems to grow quickly, accounting for 22.6% of the storage systems market by 2007.

Like Fibre Channel SANs, iSCSI allows servers to write data to storage arrays as though the devices were directly attached to the server. But unlike Fibre Channel, iSCSI storage systems can use Ethernet cabling, switches and adapters. Fibre Channel still has the advantage in high-performance data center applications, but iSCSI lets administrators create IP SANS for other applications where the expense of dedicated Fibre Channel host bus adapters, fiber-optic cabling systems and storage arrays can't be justified. IP SANs offer substantial savings over Fibre Channel SANs, especially when Serial ATA disks are used, analysts say.

iSCSI

Projected worldwide unit shipments of iSCSI storage arrays:



SOURCE: "WORLDWIDE iSCSI FORECAST AND ANALYSIS" IDC 2003

Wayne, N.J.-based ECI Conference Call Services LLC already uses Fibre Channel SANs for some applications, but CIO B.J. Weschke is using iSCSI storage appliances to support his new Postgre SQL database servers. Fibre Channel would have been too expensive because the servers need to be installed in remote locations, he says. The appliances were less expensive, and despite warnings that latency associated with using a TCP/IP network might require specialized ToE Ethernet adapters, performance of the iSCSI storage arrays has been adequate with standard Gigabit Ethernet adapters. "The pricing is fantastic as opposed to what I would have paid for a Fibre Channel SAN," Weschke says.

"The single biggest environment I see iSCSI addressing today is Windows servers," says David Dale, industry evangelist at Sunnyvale, Calif.-based Network Appliance Inc., noting that Windows Server 2003 includes native iSCSI support. "ISCSI is making huge inroads into that right now," he says.

IP SANs could eventually move up the food chain to challenge Fibre Channel, but for now, the main appeal is in low and midrange servers, replacing direct-attached storage with a single, consolidated pool of networked storage. "I see it surrounding Fibre Channel SANs, making the SAN reach way into the enterprise and not just touching a few servers," says Steve Duplessie, an analyst at Enterprise Storage Group Inc. in Milford, Mass. **47442**

MORE ABOUT THESE TECHNOLOGIES ONLINE

Ethernet plays catch-up: Several vendors say they can solve the performance and latency issues that limit Ethernet's use as a cluster server interconnect: **QuickLink 47439**

Case study: ECI Conference Call Services uses server blades and iSCSI storage appliances to power its database application:
QuickLink 47438
www.computerworld.com

Server Blade Boom Boosted by Big Players

Server blades made a big splash when they were introduced, but uptake within data centers has been limited. Blade shipments last year amounted to just 3.5% of the total server market, according to IDC, with most going into Web server farms, high-performance computing and a few other horizontally scalable applications.

But IDC analyst Vernon Turner expects blades to surge to about 40% of the market by 2008, as IT organizations begin adopting the newest designs to replace rack-mounted servers for a wider range of applications.

While start-ups launched the blade server industry, enterprise server vendors now dominate it. The vendors offer more compact and powerful designs, as well as expanded I/O options. Among the most recent advances: HP is developing a four-way blade based on the Opteron CPU from Advanced Micro Device Inc. that it says will support a "bigger memory footprint" than current designs. And IBM is developing a blade based on its Power CPU architecture and has partnered with other vendors that are offering blade-size Gigabit Ethernet and Fibre Channel switches that fit into and can be managed as part of its eServer BladeCenter chassis.

Blades do have drawbacks. One is heat [see "Moving Toward Meltdown," QuickLink 41566]. "Thermal issues are magnified when you have a lot of dense servers. Data centers are not designed to handle that," says David Lawler, group marketing manager in the network systems group at Sun Microsystems Inc. As a result, many customers leave racks half-filled, he says, making the blades less space-efficient. And because every vendor uses a proprietary chassis, server blades aren't interchangeable. That has hindered adoption, says Turner. "The reality from a customer perspective is that once you have a chassis, you don't have a lot of choices as to what goes into it," adds Lawler. But Tim Dougherty, director of eServer BladeCenter at IBM, doubts most customers want to mix blades within a chassis. "When I do that, who do I call for service?" he asks.

As the technology advances, the benefits of blades will outweigh these concerns, Turner claims. "There's a tremendous opportunity for multiple OSs running inside a single blade environment," he says. Blades are likely to gain ground as a tool for server consolidation as well as for virtualization and utility computing.

SERVER BLADES
Enterprise server vendors have rapidly taken the lead from start-ups in the blade server market. IBM's four-processor HS40 (above) and HP's BL series now dominate.

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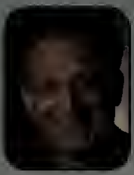

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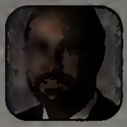

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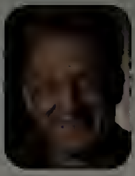

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- Professor of Statistics, Data Mining and Electronic Business, Stanford University
- Professor of Information Systems, National University of Singapore
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10:00am - 9:00pm	Registration Open
Noon - 5:00pm	Pre-Conference Golf Outing
7:00pm - 9:00pm	Welcome Reception

TUESDAY, SEPTEMBER 28

7:00am - 8:30pm	Registration Open
7:00am - 8:00am	Buffet Breakfast
8:00am - 11:00am	Opening Presentation and General Sessions

Keynote Speaker
Andreas S. Weigend, Ph.D.
former Chief Scientist, Amazon.com

11:00am - 12:30pm	Concurrent End User Case Studies
12:30pm - 2:00pm	Networking Luncheon
2:00pm - 4:45pm	General Sessions
5:30pm - 8:30pm	Expo with Buffet Dinner

WEDNESDAY, SEPTEMBER 29

7:00am - 8:00pm	Registration Open
7:00am - 8:00am	Buffet Breakfast
8:00am - 11:00am	Opening Presentation and General Sessions
11:00am - 12:30pm	Concurrent End User Case Studies
12:30pm - 2:00pm	Expo with Buffet Lunch
2:00pm - 5:00pm	General Sessions
6:00pm - 8:00pm	Gala Evening

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Monday, September 27, Noon

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- ☐ Other

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- ☐ CIO/CTO
- ☐ VP/GM/Director
- ☐ IS/IT Director/Manager
- ☐ Other IS/IT Department Manager/Supervisor
- ☐ Corporate/Business Staff
- ☐ Other Corporate/Business Manager
- ☐ Consultant (Internal) or Other

The one item that best describes your involvement in the IT purchase process:
- ☐ Authorize the purchase
- ☐ Approve the budget
- ☐ Initiate the purchase
- ☐ Evaluate / recommend products, brands, vendors
- ☐ Identify / establish the need to purchase
- ☐ All of the above

Number of employees in your entire organization (ALL locations):
- ☐ Over 10,000
- ☐ 5,000 - 9,999
- ☐ 1,000 - 4,999
- ☐ 500 - 999
- ☐ Less than 500

What is the estimated annual revenue of your entire organization?:
- ☐ Over $10 Billion
- ☐ $1 Billion - $9.9 Billion
- ☐ $500 Million - $999 Million
- ☐ $100 Million - $499 Million
- ☐ Less than $100 Million

Your organization's annual IT/IS budget for all IT/IS products:
- ☐ Over $1 Billion
- ☐ $500 Million - $999 Million
- ☐ $100 Million - $499 Million
- ☐ $10 Million - $99 Million
- ☐ $1 Million - $9.9 Million
- ☐ Less than $1 Million

What is your organization's primary vendor for BI/data management solutions?:
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- ☐ Oracle
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- ☐ Siebel
- ☐ Informatica
- ☐ Microsoft
- ☐ Information Builders
- ☐ Other

What is your organization's most mission critical project within BI/data management this year?:
- ☐ Creating the vision and strategy: Analyzing ROI
- ☐ Planning, designing, building the BI infrastructure
- ☐ Building / managing the operational information stores
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BRIEFS

Peribit Launches WAN Optimizers

Peribit Networks Inc. in Santa Clara, Calif., is announcing two hardware products and a new version of its software to optimize bandwidth over WANs. The SR-100 Sequence Reducer is designed to offer OC-3 compressed output speeds and serve as a hub supporting up to 2,000 remote SR devices. It's available now, starting at $24,000. The SM-500 will be available in August, starting at $9,000. Peribit's Sequence Reducer Software 5.0 is designed to facilitate installation of SR and SM hardware. SRS 5.0 is free with SR and SM products.

BPM Unveils Latest Dashboard

BPM Partners Inc. in Stamford, Conn., has introduced a performance management dashboard for health care organizations. The Healthcare Industry Expert Pack allows users to easily combine raw data from multiple sources to track metrics such as patient satisfaction, average number of hours of staff overtime per week and mortality rates, according to the company. The dashboard is priced at $30,000, which includes a 25-user license for the Web-based technology, implementation and best-practice industry metrics. Prices vary depending on the number of additional users and the amount of customization.

Egenera Certifies Sybase Products

Sybase Inc. in Dublin, Calif., and Egenera Inc. in Marlboro, Mass., have partnered to certify their combined products to make it easier for enterprise customers to move their applications from proprietary Unix to Linux. Under the deal, Egenera has certified Sybase's Adaptive Server Enterprise, Replication Server, Open Server and IQ products for use on its BladeFrame and BladeFrame ES server systems. The offerings are available now.

ROBERT L. MITCHELL

Microsoft: Getting to Secure Enough

IF MICROSOFT WERE A SHIP, it would be the *Queen Mary*. It's a massive $32 billion vessel with some 55,000 crew members, and it's difficult to maneuver quickly. Yet since Bill Gates signaled a fundamental change in direction toward improving the security of Windows and other products a few years ago, many people have been disappointed at the ensuing pace of progress.

ROBERT L. MITCHELL is *Computerworld*'s senior features editor. Contact him at robert_mitchell@computerworld.com.

Windows XP Service Pack 2 is the latest indication that the bow of the software dreadnought is finally turning. The question now is how far in this new direction Microsoft is willing to go.

As the promised midyear release for SP2 slips to late summer, IT professionals experimenting with Release Candidate 2 will find that it represents a departure. While SP2 won't make Microsoft's Windows security woes go away, it's arguably the most important security-related release to come from Redmond to date. That's not just because of the number of security-related fixes it contains but also because of the types of trade-offs the software vendor has been willing to make along the way. Rather than just patch problems, Microsoft has addressed some fundamental design issues. And it has been willing to make changes in the name of improved security that can break some Windows applications — a fact attested to by postings to the newsgroups on the SP2 beta Web site.

Microsoft has already patched the buffer overrun capability that let the Blaster worm exploit the RPC subsystem and remotely execute code on users' machines. But by changing the RPC/DCOM architecture and totally shutting down the ability for programs to establish anonymous connections, SP2 addresses the underlying problem. The trade-off: Many legitimate programs that rely on anonymous connections will have to be changed or they won't work anymore. Likewise, the decision to turn on Windows Firewall and the new pop-up blocker by default may cause some things to break.

Microsoft signaled its willingness to make such trade-offs earlier this year when it issued an Internet Explorer update that blocked the use of the @username:password Web URL syntax commonly used for authenticating to Web sites. Some hackers exploited weaknesses in this mechanism in phishing scams to steal user names and passwords. Under pressure to act quickly, Microsoft gave just a few weeks' notice of the update and sent Web programmers scrambling to adjust.

As for the trade-off between ease of use and better security, Microsoft has given a grudging nod toward security there as well. Windows XP is both a consumer and business product, and the desire to balance the needs of both groups has pulled the company in two directions. It's hard for Microsoft to resist the urge to ladle on new consumer-oriented features that may introduce new vulnerabilities, and the company historically has been loath to enhance security when it meant sacrificing user convenience. With SP2, Microsoft finally seems to get the idea that simply offering security options hidden away inside Windows isn't enough. "If we don't turn [the firewall] on by default, 85% of people won't change it," says Greg Sullivan, lead product manager of the company's Windows division. So Microsoft has turned on the firewall by default and made it and other security settings accessible via a new icon called Security Center.

To get an idea of just how far Microsoft's thinking has come, consider how SP2 handles .zip files. These can contain viruses that antivirus programs can't detect, so SP2 blocks all such attachments. To open a .zip file, the user must first save it to disk, then select it, bring up the Properties dialog box and click on an option to unlock the file. That makes handling of .zip files pretty inconvenient but safer. Likewise, blocking of unsigned ActiveX controls will force users to think twice before accepting what may be spyware or some other potentially malicious program.

But better security hasn't won out in every case. Windows Update's new delta patching feature makes keeping patches up to date easier by keeping download file sizes smaller. But SP2 still won't turn on Windows Update by default. "Users said they didn't want us to make that decision for them," explains Sullivan. That's too bad, since legions of unpatched consumer and small-business machines are a big problem for everyone.

But a bigger problem is that Microsoft still doesn't have a well-articulated strategy for notifying and pushing updates out to *all* Windows users who need them — especially those who don't have broadband connections and can't download updates such as the 264MB SP2 preview package.

That said, SP2 represents a clear step in the right direction. And while Microsoft may never have the most secure products in the industry, there are positive signs that users may eventually end up with a Windows that's secure enough. **47662**

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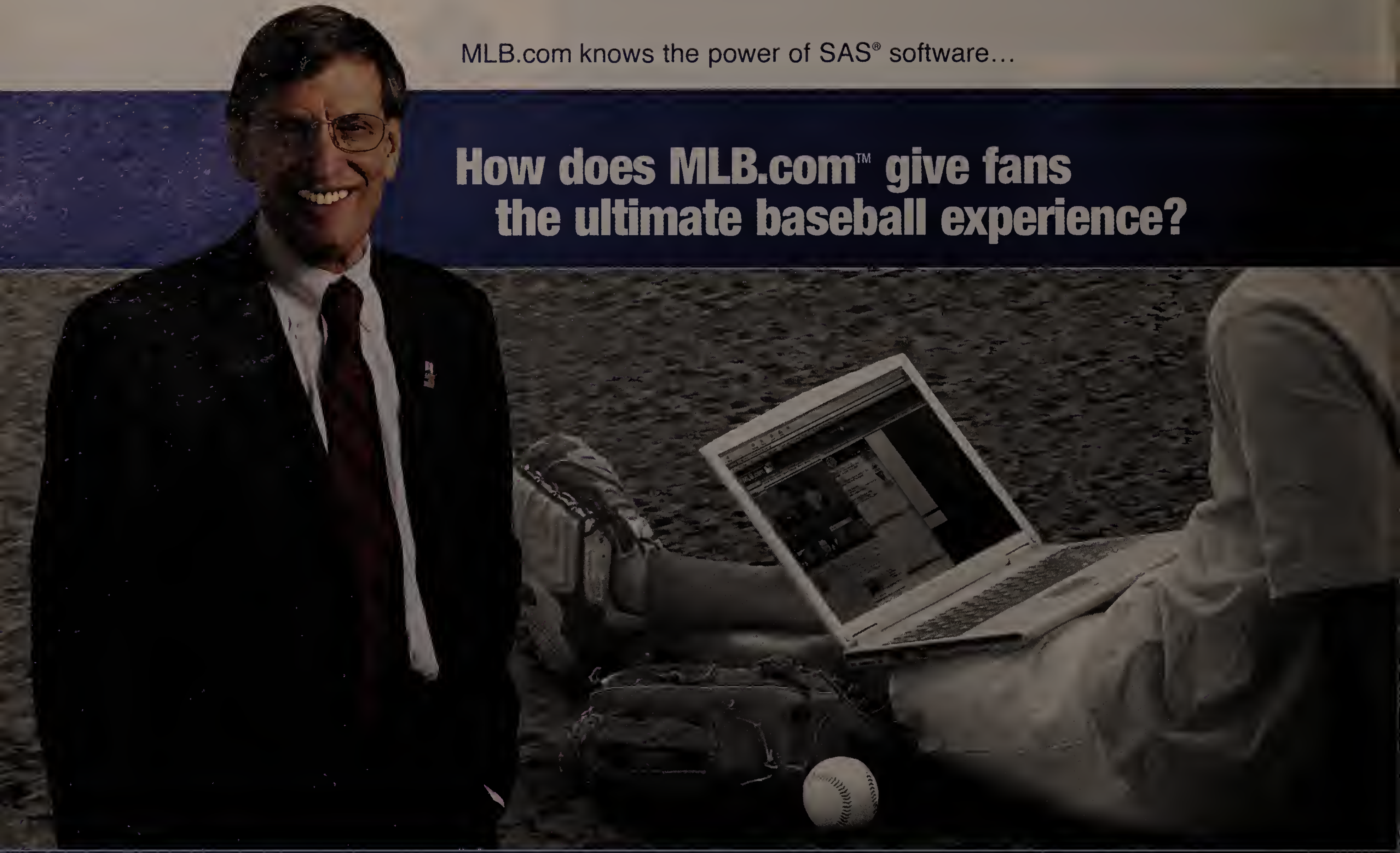
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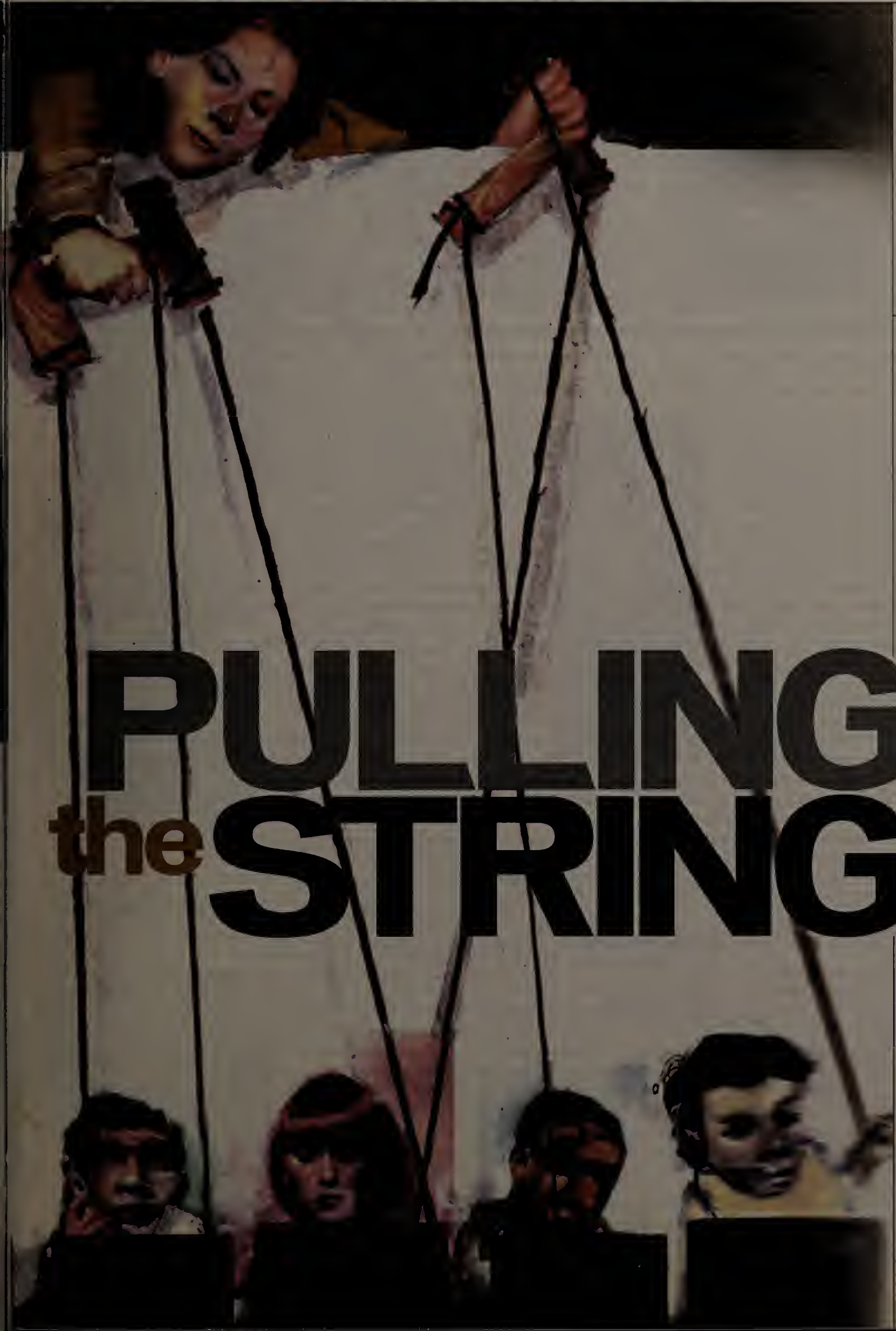


DAVID HOLLENBACH

PULLING the STRINGS

Managing today's outsourcing deals requires constant attention, big budgets and specially trained staff.

By Stacy Collett

WHEN JON CARROW joined Wyeth Pharmaceuticals seven years ago as senior director of global IT sourcing, he faced a daunting task: Building a team capable of managing more than a dozen outsourcing relationships simultaneously.

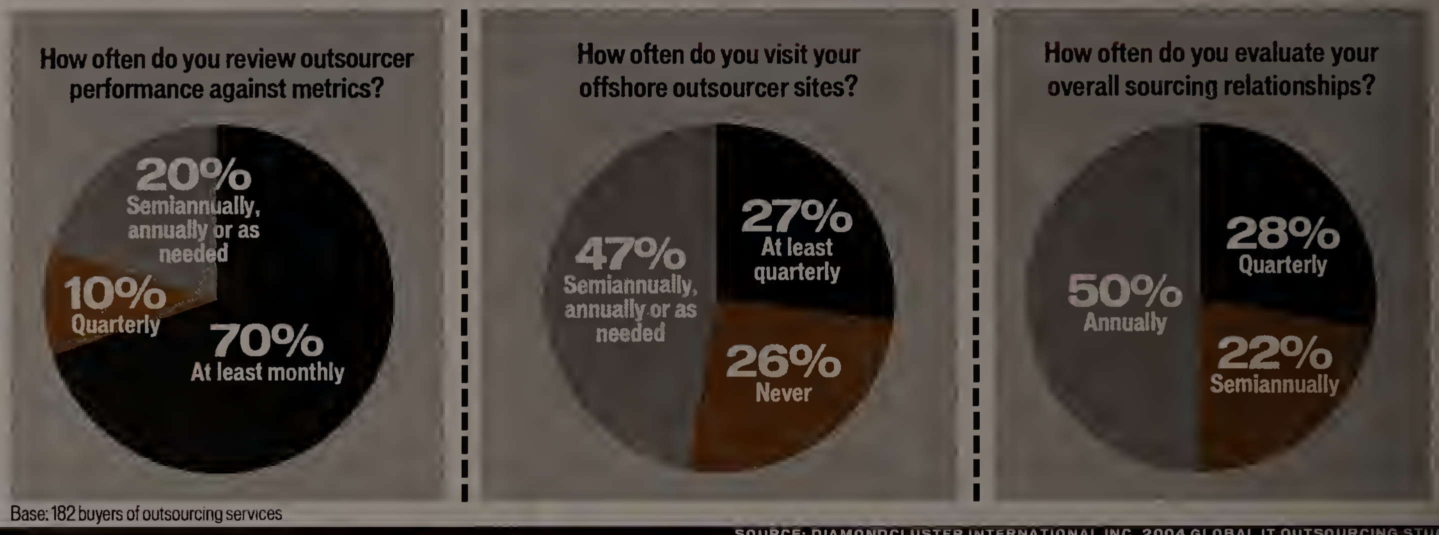
Wyeth Pharmaceuticals (formerly American Home Products Corp.) was expanding its outsourcing agreements to include desktop and networking services and hosting operations for its multibillion-dollar businesses around the world. With the growing scope and length of those contracts, outsourcing decisions affected not only the IT department but business units as well. The division of Madison, N.J.-based parent Wyeth couldn't simply sign on the dotted line and leave day-to-day management to its suppliers. This new phase of outsourcing required serious contract management.

"IT sourcing is an emerging role within the IS function," and the job requires skills not typically found in the IT department, says Carrow, who now has a 13-member sourcing staff.

Most companies that outsource IT functions face a similar dilemma. As outsourcing contracts grow more complex, their impact reverberates throughout the organization. When outsourcing relationships aren't monitored closely, dissatisfaction can follow. Of 182 buyers of outsourcing services surveyed by DiamondCluster International Inc., 26% said they were dissatisfied with their outsourcing efforts. Moreover, 21% said they had prematurely terminated an outsourcing arrangement in the past 12 months, according to the Chicago-based consulting firm's 2004 survey.

Today, managing an outsourcing relationship requires upfront planning, a highly skilled management team, constant com-

HOW THEY MEASURE UP



Base: 182 buyers of outsourcing services

SOURCE: DIAMONDCLUSTER INTERNATIONAL INC. 2004 GLOBAL IT OUTSOURCING STUDY

munication and an expanded budget.

Here's how some outsourcing veterans recommend going about it.

PLANNING

Experts say outsourcing decision-makers should choose a contract management team before choosing the supplier. The team should manage the request-for-proposal process, ensuring that the requirements in the proposal are met. Delaying that step may be "the biggest mistake that any client makes," says Don Flores, project director for the sourcing management practice at TPI, an outsourcing consulting firm in The Woodlands, Texas. An outsourcing transaction, he explains, is "an enterprise change event" that requires a change management program to make the appropriate adjustments and communicate that changes are coming.

THE TEAM

The rule of thumb for contract management staff size is five to seven employees on the client side for every 100 people that are assigned to an outsourcing engagement on the supplier's side, says Paul Roy, an attorney at Mayer, Brown, Rowe and Maw LLP, which handles outsourcing contracts for Procter & Gamble Co., Motorola Inc. and Bank of America Corp.

Current IT staffers may not have the requisite skills for the management team. "Good vendor managers are very detail-oriented people who can get into the terms, conditions and nuances" of an outsourcing agreement, explains Barbara Gomolski, an analyst at Gartner Inc. and a *Computerworld* columnist. The team should also have negotiation, project management and issue resolution skills, strong communication capabilities and financial experience, she says.

Wyeth's Carrow looked outside normal IT circles for his sourcing team. "One of my people was a contracting officer for the Navy. One guy worked for a company that did outsource consulting," he says. "The biggest [requirement] was someone who understood IT but was not so into technology that they couldn't look at the broader business side of things."

MANAGING

Once the team is in place, it will need to monitor more than just the day-to-day operations of the supplier. Team members also need to watch for changes in their own company's business and technology and how laws pertaining to the industry may affect the outsourcing agreement. Good management requires constant attention to four areas:

- **Performance.** The staff has to monitor standards, policies and the delivery of services from the supplier. Team members must work with the business to understand its needs and communicate them to the supplier. They must balance the demand for newer, better, faster technology against the cost.

The staff should also closely manage service levels that could prove costly if the outsourcer let them slip. Collecting and managing performance data requires effort, says Bart Perkins, managing partner at Leverage Partners Inc., a consulting firm in Louisville, Ky., and a *Computerworld* columnist. But not doing so "can be a costly mistake."

- **The relationship.** The staff has to handle problems before they become catastrophes. "There will always be disputes," Roy says. "It's essential to have a mechanism that's going to address disputes at all levels. If you wait for them to bubble up to the top of the pyramid, you're creating a sense of dissatisfaction and antagonism at lower levels and a bottleneck at the top."
- **Finance.** The staff must ensure that invoices are correct, analyze consumption and forecast budgets.
- **Contract administration.** The staff needs to manage internal controls and contract compliance. A basic challenge, Roy says, is to make sure the contract doesn't "commit the customer to standards that are obsolete." So the team has to benchmark the supplier's performance against those of competitors and make sure it's meeting contractual commitments, particularly those that are adjustable. This requires the team to monitor the market and renegotiate as technology standards change.

Failure to do so can be costly. Perkins tells of a company that outsourced procurement and management for 30,000 desktops. The multiyear contract stated that as the PC manufacturer lowered prices, the outsourcer would pass those reductions on to the company. But the customer never checked, and the outsourcer kept the difference. "The company's failure to monitor its outsourcer cost it over $1 million per year," he says.

IT outsourcing veterans say building benchmarking into outsourcing contracts enables them to feel more comfortable signing longer-term deals because they know they're covered as the market changes.

COMMUNICATION

As the performance, contractual, financial and relational data is collected, the information must be continually communicated throughout the business. The Web is a great vehicle for doing this efficiently, Gomolski says. "If you have this data available in a Web-based form, you can present different views to the people who need to know," she explains. For example, the person managing operations wants to see the day-to-day metrics, transactions and bottlenecks. The head of applications is looking for technology utilization. The CIO is interested in the cost and quality of the relationship. "It's all about getting the right information to the right people so they can make decisions," she adds.

MYTHS & REALITIES

Gartner helps set the record straight on outsourcing:

QuickLink 47283
www.computerworld.com

Outsourcing vendors can often save your company from having to reinvent the wheel as it develops contract management systems. Electronic Data Systems Corp. and Computer Sciences Corp. offer online tools that give a dashboard view of service levels. Fieldglass Inc. in Chicago and Cendura Corp. in Mountain View, Calif., have developed software to manage the life cycle of an outsourcing agreement.

But no amount of technology can replace face-to-face visits. The frequency of visits to an outsourcer depends on its location and the scope of the deal. When Pavan Nigam led outsourcing efforts at Santa Clara, Calif.-based Healtheon (now WebMD Corp.) in the late 1990s, he learned this the hard way. His team quickly realized that semiweekly conference calls couldn't bridge the cultural and time-zone differences between the company and its offshore development center in India. So Healtheon increased its budgets for travel, communications equipment such as videoconferencing, and team-building events for its counterparts in India.

BUDGET

Depending on the scope of the deal and the location of the outsourcer, expect to spend 2% to 6% of the annual cost of the agreement to manage the relationship, according to industry estimates. "Be prepared to invest in the infrastructure, capital and people," says Nigam, who is now CEO of Cendura, which he co-founded. "Some people get so enamored with the cost differential that they don't want to invest in infrastructure."

And put aside money for training the sourcing management team, says TPI's Flores. "A lot of people who step into these roles are first-time sourcing management people," he explains.

Managing an outsourcing agreement is complex, but IT groups are getting better at it. "IT people are a lot savvier about this than they were five years ago," says Gomolski. "People are learning from their experiences and will continue to improve." **47280**

Collett is a freelance writer in Chicago. Contact her at stcollett@aol.com.

QUICK HITS

What's Grid?

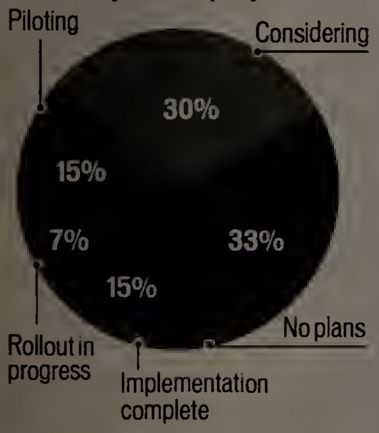
What does the term *grid* or *grid computing* mean?

38%	[illegible] computing [illegible] several coupled [illegible] perform as one
32%	[illegible] for efficient [illegible] of data across [illegible] of systems
30%	[illegible] parallel processing of workloads across [illegible] computers
20%	[illegible] term that has [illegible] meanings
15%	[illegible] or similar to virtualization of IT resources
11%	Same as or similar to utility computing
15%	Don't know

Base: 149 large North American companies (Multiple responses allowed)

Grid Rollout

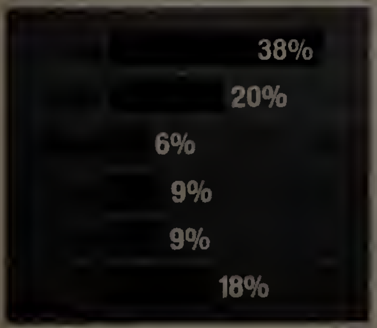
Highest level of implementation for any grid application in your company:



Base: 123 large North American companies

Multiple Grids

Number of grid applications in use at your company:



Base: 45 large North American companies using grid

SOURCE: FORRESTER RESEARCH INC., CAMBRIDGE, MASS., 2004 SURVEY

BARBARA GOMOLSKI

Defusing the Chargeback Minefield

ONE OF THE MOST daunting tasks IT leaders face is how to structure a cost recovery — or chargeback — system that works. Countless CIOs have been burned or even seen their jobs put in jeopardy over poorly designed chargeback plans.

It's incredible how long business unit managers remember a poorly designed chargeback system. These are the same executives who can't recall recent conversations about rising software costs, the need for ongoing infrastructure upgrades or the requirement to add more support staffers when the IT workload increases. But give them a bill for IT services that they perceive to be inaccurate or unfair, and they'll remember it vividly for years. They'll even recall the exact details associated with the so-called error!

So, how do you avoid introducing a chargeback system that will live in infamy? Here are some tips that may help:

Solicit customer input. The biggest mistake that IT leaders make is to go off into a room with their top people, cook up a logical chargeback system and foist it upon the business. These chargeback plans may be very well-thought-out and quite fair, but the business customers invariably push back with a barrage of complaints about fairness and accuracy.

A better plan is to approach the business managers, describe their alternatives for paying for the IT services that their departments consume and let management pick the method of chargeback. It's a lot harder for these business managers to later complain about a chargeback system that they chose.

Consider what customers value. When looking at chargeback, it's important to consider what business managers value most. For instance, do they value predictability in IT costs? If so, a flat-rate approach may be best, since it doesn't fluctuate based on use.

On the other hand, you may have business managers who are adamant about not paying for IT services they don't consume. For them, accuracy in the chargeback system is paramount, and a measured usage approach may be in order. A key criterion for some business managers is having a measure of control over their IT costs. For them, a chargeback system that allows for the reduction of IT consumption (and their requisite costs) may work best.

Finally, some managers may prefer to buy IT services from your organization just as they would from vendors in the outside market. These managers are likely to favor a service-based chargeback model in which all the costs associated with a particular service are rolled up in one price.

Don't forget the culture. When looking at chargeback, carefully consider the organization's culture and measurement capability. For instance, an extremely complicated chargeback system with prices based on usage probably isn't a good fit for an organization that likes to take a simplistic approach to administrative matters.

Balance costs and benefits. Remember to balance the benefits of chargeback with the administrative costs. Once, I visited a firm that had several hundred employees working on the IT chargeback system. Even though it was a large, global organization, it's hard to imagine that it was getting the requisite value for that kind of investment of labor.

Think user; think usage. In a nutshell, it usually comes down to charging by the user or charging by the usage. Most companies choose to do a bit of each, depending on the type of IT service. For instance, infrastructure is more likely to be charged based on the number of users, since almost everyone in the organization consumes those resources at a similar pace. Access to a data warehouse, on the other hand, is likely to be charged by usage, since there's considerable variation in the level of utilization among individuals.

Here are some final points to consider when building a chargeback system:

- Fully implementing a chargeback plan takes time, usually one to two years.
- IT chargeback systems within an organization must continually change and evolve, just like any marketplace. It's unrealistic to expect to find the perfect chargeback system and use that indefinitely.
- An IT organization doesn't have to have a chargeback system to be successful. While it's true that the "free IT" phenomenon usually leads to runaway demand, some organizations are, overall, better off without chargeback.

47161

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Nokia for Business

Profiles in Business Mobility #10 | Security

Be cool, Mr. "I Have Security Issues."
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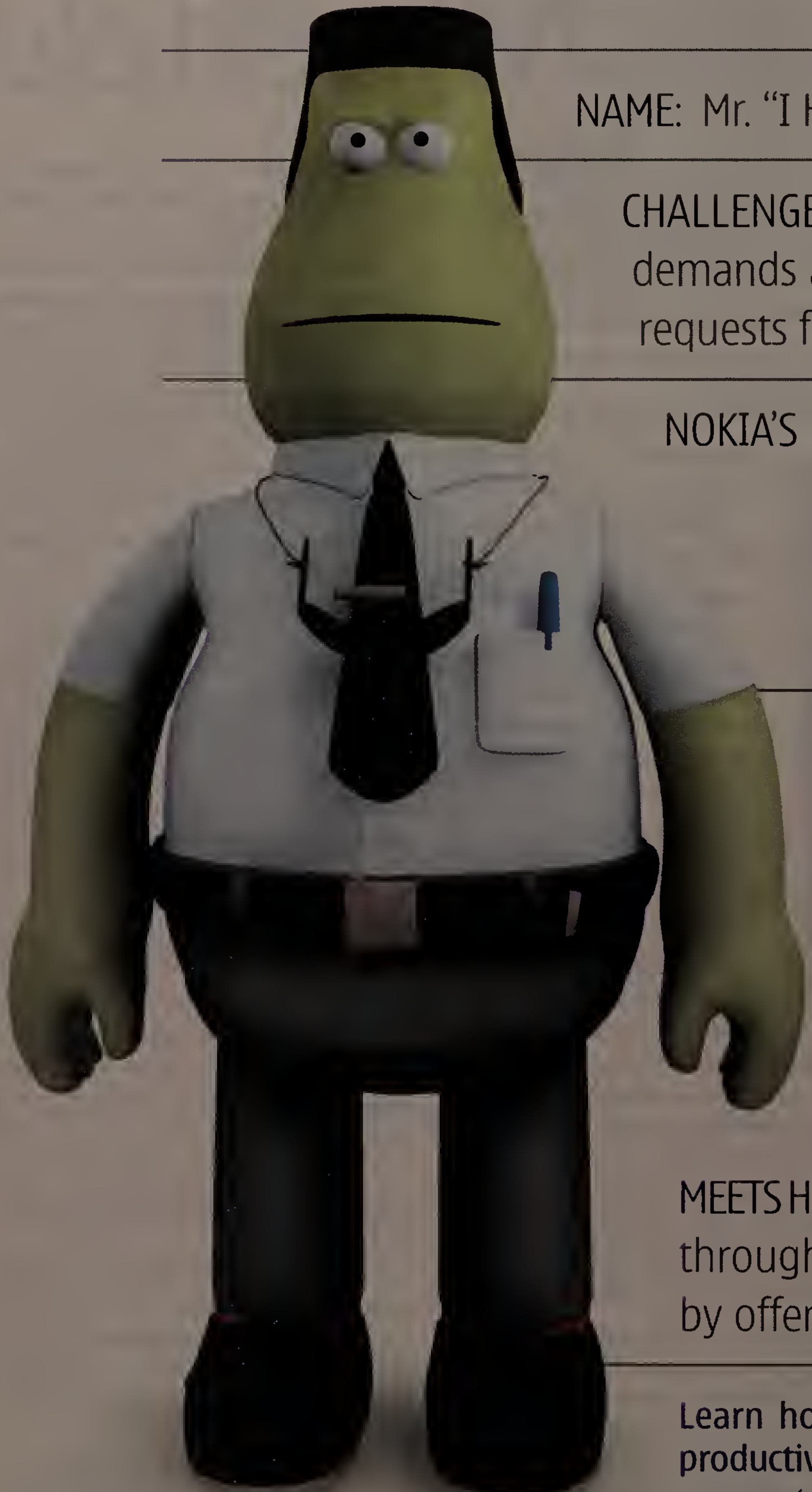

NAME: Mr. "I Have Security Issues" | QUOTE: "Is it safe?"

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SPECIAL REPORT ON-DEMAND COMPUTING

06.28.04

In Plain English

On-demand computing at the enterprise level takes discipline, a deep knowledge of business processes and a rethinking of the organizational structure of IT. Users and experts cut through the hype and explain what you need to know. **PAGE 34**

The Pioneers

Furniture buyers hit the shops on federal holidays. Vacationers hit the roads in summertime. Businesses with seasonal demands such as these have found savings by being early adopters of on-demand computing. **PAGE 36**

OPINION

Destination Desktop

All the major vendors are talking about on-demand computing as a server technology. But columnist Mark Hall says there could be real value to exploiting this computing model on the desktop. **PAGE 42**

HARD BORGE

ON-Demand, UN-Hyped

On-demand computing is confusing. We explain it in plain English and identify the pros and cons.

EDITOR'S NOTE **IN ANTITRUST LAW,** you must define the market you're analyzing — put some borders around it — before you can decide the case. That's what we had to do for this special report, too, because on-demand computing has different definitions depending on whom you talk to and how many semi-related technologies they tack on.

Ultimately, we settled on this: On-demand computing is the dynamic allocation of computing resources to meet fluctuating business demands on a pay-per-use basis; it can be done internally or by a service provider. And we're focusing on the hardware side rather than on that buzzword thicket of on-demand software also known as application hosting and software as a service.

Then we decided to explain on-demand computing in plain English, so you can explain it to the CEO (see page 34). Our survey of 765 IT professionals showed a three-way split, with some users already adopting on-demand computing, some considering it but not yet sold on it, and some figuring it's a grand scheme to boost vendor revenue. So we've got stories about the pioneers, the tire-kickers and the skeptics.

My hunch is that we're just starting on a slow, incremental, 10-year journey, with many issues to be worked out, such as fair pricing and how to avoid vendor lock-in. On-demand computing seems to work for companies that must ramp up IT for peak business seasons, but it may not be for everyone. **47479**

Mitch Betts is Computerworld*'s Features editor. Contact him at mitch_betts@computerworld.com.*

Ben Flock, vice president of virtualization at Cigna, says on-demand computing "looks like the real thing."

TRACEY KROLL

IN Plain English

Users and experts cut through the hype – and dissect the buzzwords – to explain what you need to know about on-demand computing. **BY STEVE ULFELDER**

THE LINGO, COMPLEXITY and sheer scale of on-demand computing often seem so vast as to be paralyzing. But when you peel away the marketing spin and the many terms used to describe this phenomenon, you can reduce it to two phrases that everybody understands: "waste not, want not" and "pay as you go."

While the concept may be simple, the execution isn't. Full on-demand computing at the enterprise level requires degrees of reporting and management unheard of at most companies. It also entails rethinking the organizational structure of IT — focusing on business needs rather than on technical specialties.

In an effort to hack through the definition thicket, here's a simple way to think of on-demand computing: It's when computing resources are made available to users on an as-needed, pay-per-use basis. These dynamically allocated resources may be maintained within the enterprise itself, or they may be procured through a service provider.

Many in IT use the term *utility computing* as a synonym for *on-demand computing*, but *utility* implies near-total use of outsourcing, application service providers and managed services. For some business executives, the idea of turning on a tap and getting all the IT you need — along with an easy-to-read bill at the end of the month — is appealing. But it will be a long time before this is the reality in any sizable enterprise. Existing investments in infrastructure, as well as the desire to use IT as a competitive differentiator in selected strategic areas, make the 100%-utility model unfeasible for most.

However you define it, on-demand is in demand. In a recent *Computerworld* online survey, 32% of the 765 respondents said they are pursuing, piloting or have deployed on-demand computing, while 30% are investigating it. Economics is the primary driver. "Most companies have optimized their IT environment and are looking for ways to find additional gains," says Jo-An Skowronek, vice president of business development at Affiliated Computer Services Inc., a Dallas outsourcer.

Emphasis on Cutting Costs

In 2003, when Cigna Corp. began talking with IBM about on-demand, cost reduction was the principal motivator, according to Ben Flock, vice president of virtualization at the Philadelphia-based health care insurer. Cigna was using more than 3,000 servers for

Terms to Know

UTILITY COMPUTING, sometimes called metered services, is a subset of on-demand computing in which IT resources are provided by an outside services firm and the client company pays only for what it uses. (To many, *utility computing* and *on-demand computing* mean the same thing.)

GRID COMPUTING is the practice of applying multiple computers' processing power to a single problem simultaneously. [illegible] as a way to use computers that would otherwise sit idle to solve complex scientific problems, grid computing is still most frequently used in the technical, scientific and academic communities.

THE VIRTUAL DATA CENTER entails pooling resources to make individual components behave as if they were a [illegible]

AUTONOMIC COMPUTING describes an infrastructure that monitors itself, allocating resources and even making repairs without human intervention.

myriad applications, including self-service portals used by many of its 10 million customers. "We'd been developing apps on fly, so we had a lot of legacy [systems]," Flock says.

Initially, Cigna's goal was simply to move all applications to a single version of IBM's WebSphere "to drive down operating expenses," he says. But when IBM said Cigna was a candidate for on-demand, Flock agreed.

Other on-demand pioneers also turned to the computing model to save money. Two years ago, when Exxon Mobil Corp. in Irving, Texas, made its Mobil Travel Guide unit an autonomous division, Mobile Travel Guide CIO Paul Mercurio went the service-provider route, opting for IBM's On Demand Linux Virtual Services to host and manage the division's e-business applications. "Despite the Exxon Mobil name, we were acting as a start-up. We knew we would grow rapidly, and our business was seasonal," he says (see story, page 36).

Every major enterprise software vendor offers on-demand in some form, depending on that vendor's history and strengths. Some focus on management and reporting tools, others on virtualization and still others on the services model.

But a successful on-demand strategy demands organizational change as well. At Georgia-Pacific Corp., CIO James Dallas is trying to retool the IT mind-set before introducing on-demand products and services. His goal is to help his 1,200 IT employees think more like business people before the Atlanta-based conglomerate shifts to on-demand.

"We need to run IT like a business, but what does that really mean?" asks Dallas. "To someone who's been in IT all his career, that's an empty phrase."

To make the phrase meaningful, Georgia-Pacific is putting all its IT employees through financial-skills workshops and other fiscal training. Dallas has also tasked a communications specialist to constantly communicate the changes the new model will bring, and Georgia-Pacific has formed centers of excellence around three key areas — business intelligence, server support and e-commerce — in which on-demand will be put to the test.

"We're still early in the process," says Dallas, "but we think it's important to adopt on-demand as a business model, then put the technology in place."

Alignment Is Everything

If there's an underexplored aspect of on-demand, it's that the model can't succeed in one of its primary goals — aligning IT use with business needs — unless coupled with a business process methodology. Some of the methodologies designed to do just that are IT Information Library (ITIL), balanced scorecard, business service management and portfolio management.

These disciplines force organizations to begin at square one, which may prove frustrating for IT managers expecting quick benefits. Even basic nomenclature must be addressed; if *storage capacity* or *administrator* isn't defined exactly the same way across all of an enterprise's data centers and IT groups, it will be impossible to pool and manage these resources. According to Chris Buss, manager of virtualization at Hewlett-Packard Co., this lesson was learned by Philips Semiconductors when the manufacturer implemented the Utility Data Center, HP's flavor of on-demand.

"Philips quickly found out they needed standard nomenclature in place," Buss says. "So with help from us, they used ITIL to create a set of universal definitions they called the Soldier's Handbook." Buss says Philips has since achieved 45% cost reductions in its data center operations.

Getting Serious

Early users notwithstanding, on-demand has until recently been shrouded in unrealistic expectations and conflicting definitions. Fortunately, the peak hype has passed, replaced by sober assessment of the model's limitations. "There are a number of business objectives on-demand can help solve," says Bill Mooz, senior director of utility computing at Sun Microsystems Inc. But it won't magically slash IT expenses on its own, he adds. "If your cost is too high, it may be because you're using the wrong architecture or operational model," he says. "You need to address the root cause before you start worrying about [on-demand] as a financial model."

What needs to be done to push on-demand forward? Analysts say apples-to-apples pricing comparisons would be a major step. "All the big systems vendors have noted this confluence of [distributed enterprise computing] trends and have responded with a blend of services and highly distributed software," says Dan Kusnetzky, an analyst at Framingham, Mass.-based IDC. "But they've all spun it their own way; there are now a dozen buzzwords" for on-demand.

Kusnetzky says on-demand will find greater enterprise acceptance when terminology and pricing models grow more standardized.

Flock says Cigna's move to an on-demand model for its IBM WebSphere operations has reduced costs significantly. Moreover, he adds, the maturation of the discipline promises to bring about the hoped-for tie-in between business needs and IT resource allocation.

"The initial drivers for on-demand were reduced operating expenses," Flock says. "But we're seeing other benefits now, like improved security and performance guarantees. This looks like the real thing." 47260

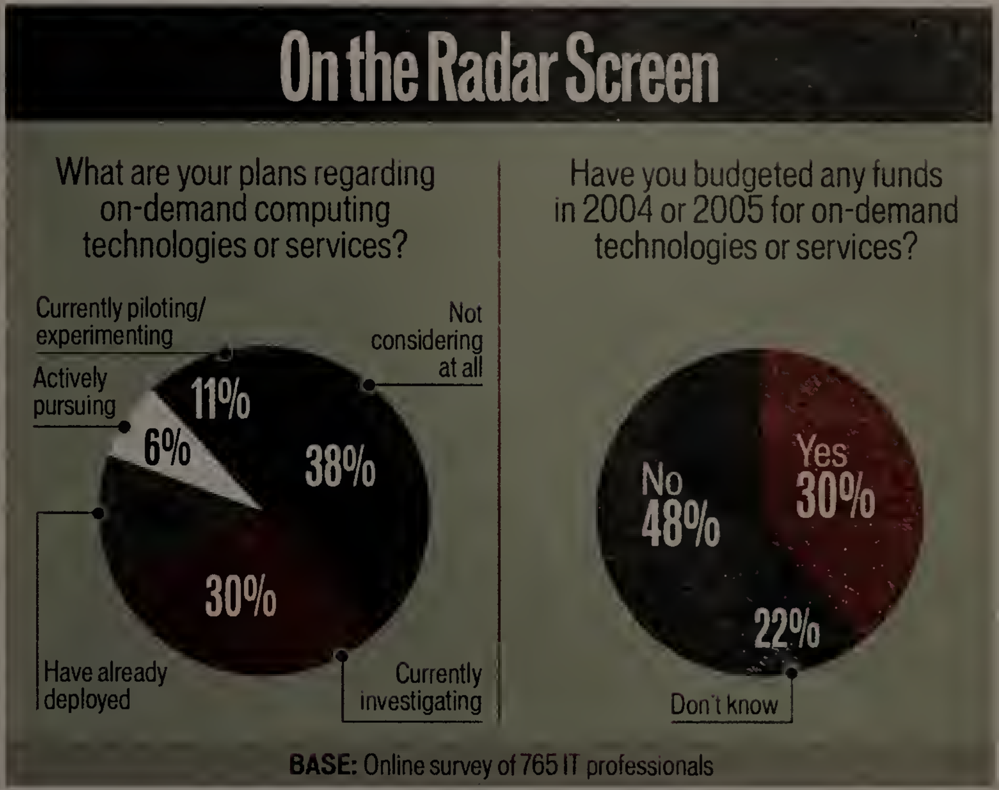
Ulfelder is a Computerworld *contributing writer in Southboro, Mass. Contact him at sulfelder@charter.net.*

An enterprise on-demand strategy demands that companies do the following:

Make existing IT resources (including personnel) more flexible, so they can be used by business lines according to need and priority.

Improve reporting and monitoring tools. This will help IT ensure that the right resources flow to the right places at the right time and that departments and lines of business are charged appropriately for their usage.

Determine which technology needs are commodities that can be outsourced or purchased on a pay-per-use basis (storage, perhaps, or the help desk) and which are strategic and should be kept in-house (such as a highly developed CRM system that's unique in its industry).



SOURCE: *COMPUTERWORLD*, SPRING 2004

DEGREES OF DOUBT

In an exclusive *Computerworld* survey, a majority of the 765 IT professionals who responded indicated some degree of skepticism about on-demand computing. Read the full survey results online:

QuickLink a4690
www.computerworld.com

RICHARD BORGE

THE Pioneers

Early adopters are using on-demand computing to help them ramp up operations to meet peak periods of customer activity. **BY STACY COLLETT**

Seasonal business spikes sparked the movement toward on-demand computing for many early adopters. In the case of two pay-as-you-go pioneers, each required a 100% increase in processing capacity for only a few months of the year. And each braved uncharted territory by choosing reputable vendors and cutting seemingly win-win deals. For them, on-demand computing is paying off.

Retailer Takes on Holiday Sales Spikes

Federal holidays and furniture sales go hand in hand. At furniture retailer R.C. Willey Home Furnishings in Salt Lake City, holidays require three to four times the IT processing capacity of a regular business day to handle the influx of orders and all the related back-end functions. That used to mean "emergency mode" for the IT staff, according to Ned Jones, information systems director. When product-ordering applications slowed, end users at the retail stores would complain, and only then did the IT staff purchase and install new processors. What's more, IT was paying for a hot standby server that mostly stood idle.

The retailer's old V Series servers that supported the company's applications were no longer equipped to meet peak demands and a growing business. In 2002, Jones reached a crossroads: Buy upgraded servers with more processors, or try one of the new pay-as-you-go programs. "In the past, we noticed we probably upgraded or added to our computers every two to four years because of demand," he recalls. So Jones signed on with Hewlett-Packard Co.'s pay-per-use lease program through HP Financial Services.

Today, R.C. Willey leases two midrange RP8400 servers, with one serving as a hot standby. Each holds eight processors. During regular business days, IT infrastructure runs between 25% and 75% of total capacity. At peak sales times, Jones turns on all eight processors, and he turns them off when they're no longer needed. The company saves 20% on the combined server lease compared with the cost of traditional purchasing.

"We wouldn't have purchased an eight-processor system," says Jones. "We would've skimped and probably bought six. [Pay per use] prevents us from buying extra processors in a hurry."

As an early adopter of HP's pay-per-use program, Jones was skeptical at first, but the numbers were convincing. "We figured on the production server, we really weren't going to save a lot," he says. "At five processors, you're paying what you would've paid on a normal lease, then after six, seven, eight processors [at peak times], you're actually paying more."

HP calculates payments based on average monthly CPU usage. The retailer pays a baseline price for the standby server. "We're saving a lot of money there," Jones says.

HP offered to refund the difference if the cost of R.C. Willey's three-year lease exceeded the cost of a standard outsourcing agreement. "There was nothing to lose," Jones adds.

Travel Site Drives Down Costs

Each year, 96 million leisure travelers flock to the Internet looking for flights, hotel rooms and maps, especially during the summer months, according to the Travel Industry Association of America. The seasonal nature of travel poses some challenges for the IT staff at Mobil Travel Guide in Park Ridge, Ill.

In the winter, Mobiletravelguide.com, which caters exclusively to road travelers, receives a few hundred thousand monthly visitors. In August, that number doubles. And when the company posts its annual ratings of hotels, restaurant and spas each fall, Web traffic increases tenfold.

Such wild fluctuations in capacity requirements led Paul Mercurio, senior vice president and CIO, to on-demand computing services in October 2002. "I saw an opportunity to go to a model where I had much more operational flexibility. I could make tactical changes without a lot of forewarning," Mercurio says.

Under an agreement with IBM, Mobil Travel Guide pays a base price for use of IBM's largest mainframe complex with z990 servers, and it can add capacity for processing, storage, memory and network connectivity as needed for an additional monthly charge. For instance, when the site suddenly required additional storage space for backup and recovery early one day, "all I did was make a phone call [to IBM], and I pay a little more for my service that month," he says. "No capital dollars involved."

Mercurio estimates that the five-year on-demand computing agreement will cost 25% to 30% less than a traditional traditional contract where hardware is purchased and then outsourced. What's more, IT staffing costs remain low. The director of system operations solely manages the IBM engagement, and IBM handles the database administration work.

Mobil Travel Guide was one of the first three adopters of IBM's Linux Virtual Services in 2002. Mercurio says the risk was mitigated by working with a well-known company. He was also familiar with Linux — his company had built a database in a Linux/Oracle environment several months earlier.

Mercurio's team went live with the new system on Oct. 28, 2002, one week before the annual ratings announcement. The Web site handled the increased traffic without a hitch. In February, when business slows, "I could cut my capacity in half and the bill would drop," he says. "We're happy." **46905**

Collett is a freelance writer in Chicago. Contact her at stcollett@aol.com.

Outsourcer Outsources Pay-As-You-Go Computing

The fluctuating technology needs of [illegible] at business process outso[illegible] A[illegible] Computer Services Inc. led the [illegible] based firm to partner with Sun [illegible] tems Inc. and adopt its utility computing model in 2003. Today ACS pro[illegible] ents with pay-as-you-go co[illegible] ty, which is fulfilled at a data c[illegible] built out by ACS and Sun [illegible] is run by [illegible]

"[Clients] are looking for [illegible] to change from the traditional [illegible] contract cycle times and the [illegible] of facilities, hardware, softwa[illegible] [and] custom processes," exp[illegible] Skowronek, vice president of [illegible] development for ACS's c[illegible] tions group. "[They] want to [illegible] simplicity and confidence," [illegible] costs and with smaller [illegible]

"We've had g[illegible] succ[illegible] demand computing," S[illegible] a good move, and it's a g[illegible] experienced capabilities [illegible]

Sta[illegible]y Co[illegible]

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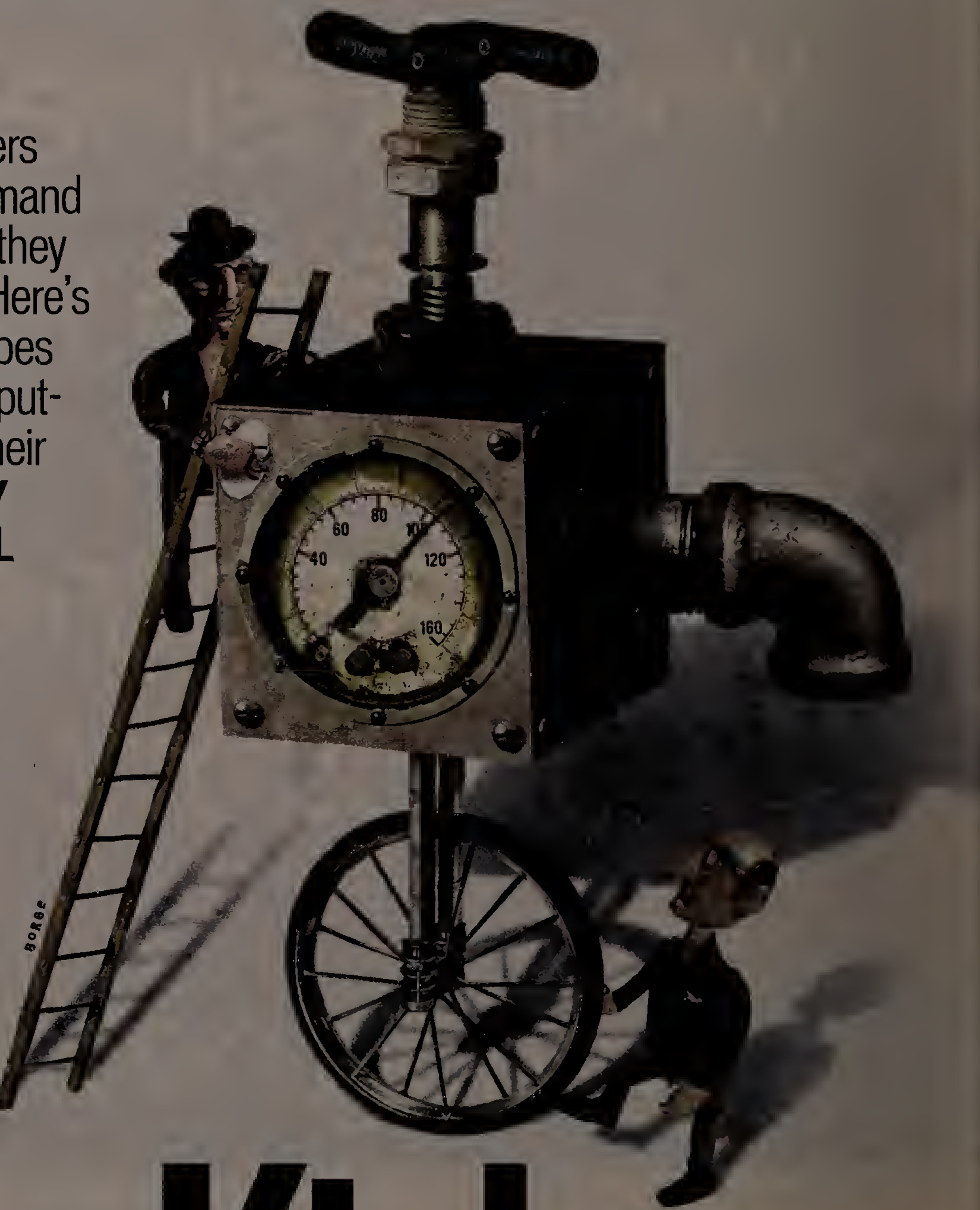
THE Tire-Kickers

These IT managers are giving on-demand a close look, but they aren't fully sold. Here's a look at their hopes for this new computing model, and their key concerns. **BY MARY BRANDEL**



RICHARD BORGE

ON-DEMAND COMPUTING is a concept some IT managers have held up to the light and turned around a few times. But while the computing model has clearly captured their interest, they're not 100% sold on it.

Like others in the IT field, they're taking a slow and cautious approach. In fact, industry experts say that while some users have already deployed applications that take advantage of utility computing for a specific function or business requirement, for most users, the road to on-demand will be an iterative process that will take years, if not up to a decade, to complete.

"I think we'll continue to see pilot projects in the short term over the next several years, with more enthusiasm and deployments building as more of the technologies necessary for utility computing come to market," says Jamie Gruener, an analyst at The Yankee Group in Boston. These developments include integrated data center automation and virtualization tools, easier-to-understand pricing models and improved capabilities to establish and maintain service levels across multiple technology layers within the data center. "It won't happen overnight," Gruener says, "but a number of larger customers have already begun the journey, with midsize customers starting to pilot programs this year and going forward."

Gordon Haff, a senior analyst at Illuminata Inc. in Nashua, N.H., agrees that on-demand will be a gradual migration. "We will reach a point where applications won't have to sit on this particular server with this much memory," he says. "Instead, there will be a pool of applications, and you won't have to worry about which server is actually running it."

Computerworld talked with three CIOs who are examining the on-demand computing model. Here's what they had to say about what they hope it can deliver, what they're concerned about and what it will take to convince them.

JAMES WASSERMAN

Harry Roberts

Senior vice president and CIO, Boscov's Department Store LLC

▪ **COMPUTING ENVIRONMENT:** In addition to a z900 enterprise server, Boscov's data center houses an RS/6000 running customer resource management, business intelligence and data mining applications. It also has a server farm made up of IBM xSeries PCs. All of these systems are connected to two 3.2TB Shark storage-area networks (SAN) from IBM and support about 700 users. Outside the data center, there are 2,500 desktop PCs (mostly IBM), 3,500 point-of-sale devices and a number of Unix servers running in-store applications.

"We're trying to position ourselves to be more open-source-oriented so that we can move our software to whatever architecture we have spare capacity on," says Roberts. "We're not quite there yet, but we hope to be in a couple of years."

▪ **HOPED-FOR BENEFIT:** The ability to better align computing costs with the monthly revenue stream.

▪ **BIGGEST CONCERN:** A lack of third-party software.

Like most retailers, Reading, Pa.-based Boscov's goes into peak computing mode two months of the year, during the November-to-December holiday shopping season. And like most retailers, the company pays year-round for the hardware and software to support that peak period.

Roberts is intrigued by the idea of on-demand computing, where the company would pay only for the computing resources it uses. "Our software is priced based on the capacity of the hardware we're using it on. So we're paying not just for hardware but for the software, based on our peak capacity," he says.

An on-demand model would not only theoretically reduce Boscov's IT costs, but it would also better align computing costs with each month's revenue.

But while Roberts sees great potential and has spoken frequently with IBM about its on-demand computing architecture, he still sees areas that need to be worked out before on-demand computing is feasible. For instance, there's the question of independent software vendors. "We haven't seen our third-party software vendors step up to the plate and have a complementary program to IBM's," Roberts says.

In addition, a move into IBM's on-demand architecture would require Boscov's to replace its IBM z900 server, since IBM's on-demand plan is focused around its z990. "To justify the necessary investment of retooling our shop, there would have to be some tangible percentage reduction in cost, and I don't know how on-demand is going to achieve that," Roberts says.

▪ **WHAT IT WILL TAKE TO CONVINCE HIM:** Roberts says he wants proof that on-demand will result in a lower total cost of ownership. "To date, there aren't enough details to make me comfortable that it will achieve my goals," he says.

Roberts also wants to see the third-party software vendors come to the table with licensing models that match on-demand architectures. "Everyone has to be in agreement," he says.

Jim Hull

Vice president of engineering services, MasterCard International Inc.

■ COMPUTING ENVIRONMENT: MasterCard has three IBM z900s; several HP/Tandem servers for its debit applications; 700-plus Sun Microsystems Inc. Unix servers for its financial and settlement applications, Web server programs, Oracle Corp. finance programs and project management system; 1,000-plus Windows NT servers; and 1,500-plus IBM x205 series PCs. The Purchase, N.Y.-based company has tried to standardize on IBM and Sun servers. For storage, MasterCard has almost all EMC Corp. systems, with some from Hitachi Data Systems Corp.

■ HOPED-FOR BENEFIT: The ability to quickly add CPUs during the holiday shopping season.

■ BIGGEST CONCERN: Varying maturity levels from different vendors, and no consistent template.

Hull is also intrigued by the possibilities of on-demand computing but believes it's quite immature. As a result, he's cautiously implementing on-demand-related technology only in pockets of the enterprise where the architecture can accommodate it and where the business truly needs it.

Although the major on-demand vendors offer technology at varying levels of maturity, there's no on-demand template that's consistent from vendor to vendor, Hull points out. This makes users susceptible to vendor lock-in. "Let's say you chose Vendor X, and it turns out it was the wrong choice," he says. "What if on-demand took a different direction, but you've already bought into what they were selling?"

Another challenge is sorting through vaporware, like in grid computing. "Vendors say, 'We have it,' " Hull says, "but then you ask, 'What leading financial industry player is using it? For what applications? How does it scale? Does it work on technology that's three years old?' It turns out that conceptually it's great, but there's not a lot of people doing it yet."

MasterCard is using on-demand technology such as SANs, which allow servers to share pools of storage, as well as IBM's Capacity Upgrade on Demand on the zSeries 900. With CUoD, MasterCard can quickly add CPUs through a firmware download. This makes the holiday shopping season easier to handle; previously, upgrades had to be planned well before peak processing time.

The trouble with CUoD is that so far, IBM doesn't let companies turn processor power off, as Hewlett-Packard Co. does. In addition, Hull says, "since you may have CA or EMC or Sterling software running on the mainframe, as soon as you add the additional IBM engine, you have to pay for those other products as well."

MasterCard has also brought Sun's Solaris 10 operating system, which is expected to enable logical partitioning, into its test environment. According to Sun, Solaris 10 will enable users to easily move applications around on existing pools of servers, adding and subtracting processing power where it's needed.

"Companies have whole pockets of servers running at 10% to 15% utility, but if you can stack multiple applications onto one server, you can get better return for your dollar," Hull says.

■ WHAT IT WILL TAKE TO CONVINCE HIM: Like Roberts, Hull says that he'd need to have a better understanding of how on-demand would be priced and how it would effect other software. "Particularly on the mainframe, where you have IBM, CA, Sterling, BMC and a whole bunch of other software — while it may make sense financially for the IBM piece, you might drive up the cost significantly on the others," he says.

There are two other areas Hull would like addressed: better industry standards for vendors to adhere to and a long-term commitment from the vendors that they'll continue to support the on-demand models they currently promulgate. In particular, he doesn't want to start down a road with one vendor, only to end up having the vendor change direction in three or four years.

Ultimately, Hull would like the entire infrastructure to recognize and respond automatically when something changes. For instance, if CPU use increases, he'd like the storage system to automatically respond, and vice versa, without human interaction.

"In a perfect world, I'd like to have a system that turns on additional CPUs in peak season, self-provisions and makes the service-level agreement, and when that was all done, deinstall the CPUs," he says. "The only way to do that is through open systems and open standards and people all driving toward the same concept of on-demand."

Mike Prince

CIO, Burlington Coat Factory Warehouse Corp.

■ COMPUTING ENVIRONMENT: By fall, Burlington Coat Factory's environment will consist of thousands of Linux servers, many of which are IBM xSeries; some Windows desktop clients; Dell Inc. in-store servers; and a few Sun Sparc-based servers that it doesn't plan to retire. Its storage system is from Hitachi.

■ HOPED-FOR BENEFIT: A way to switch computing resources back and forth from general ledger operations at month's end to sales transactions that spike during the holiday shopping season.

■ BIGGEST CONCERN: Lack of automation to detect, monitor and activate a server.

Thanks to some old Sequent computers it had to retire, Burlington Coat Factory is pretty far along the on-demand computing path. "I don't think we'd have been as aggressive about on-demand, but we were faced with the need to make a change," says Prince. The Burlington, N.J.-based company had already moved its point-of-sale and in-store systems, as well as many functions in its distribution centers, to Linux, so it was logical to consider that operating system to replace its proprietary Unix servers.

Burlington Coat Factory is also a heavy Oracle user, employing not only its 9i database but also its ERP software and tool sets to build internal applications. With Oracle moving toward grid computing — which enables companies to dynamically move computing resources to the applications that need them — adopting that model made sense for the company.

On-demand was particularly attractive to the national retailer because of its dramatic dips and spikes in computing power needs. For instance, general ledger operations peak only at month's end. Sales transactions need tremendous amounts of horsepower, but only during the holiday shopping season.

Currently, Burlington Coat Factory has no way to switch computing power from general ledger to sales processing and back. As a result, it has traditionally bought much more computing resources than it actually needs. With on-demand computing, however, users have virtual resources in the form of clustered servers and can physically provision or deprovision those resources based on which application needs them at the time. "Instead of all those processors allocated to sales processing when you don't need them, you can allocate them to something else," Prince says.

The result: much lower overhead, and one-third to one-half of the capacity the company would need without on-demand. And because Linux runs on smaller IBM xSeries servers rather than on big-iron proprietary Unix, there are also hardware savings. "The price/performance is an order of magnitude better than the systems we're replacing," Prince says.

Burlington Coat Factory hopes to have its on-demand infrastructure in place by fall, including a leap to Oracle's 10g database. Other pieces of its virtualization puzzle include Cloverleaf Communications Inc.'s Intelligent Storage Networking System, which enables virtual storage allocation; Topspin Communications Inc.'s VFrame server virtualization software, which programs servers with the policies they need to determine when and how to cross-connect the processor, storage and I/O components to use shared resources; PolyServe Inc.'s Matrix Server, which enables servers to share storage as a single unit; and F5 Networks Inc.'s load-balancing software.

What's missing, according to Prince, is the ability to automatically detect, monitor and activate a server from a pool of spare resources. However, he's looking into technology from Vio Inc. to do that.

What's Next

Industry experts say turning these tire-kickers into buyers will take a concerted effort on the part of vendors. Gruener says the most important challenge will be market education, because many IT executives just don't understand what on-demand is. "Some see it only as outsourcing; others just as standardizing on a virtualization tool for servers," he says. "Both are myths."

Illuminata's Haff says vendors can ease on-demand migration efforts by creating models of third-party software licensing that are tied more to actual use than to specific types and sizes of hardware. They should also standardize around the management, communications and data protocols used in on-demand computing, such as the Open Grid Services Infrastructure.

"There won't be one grand on-demand standard, but rather different standards in the different layers," Haff says. "The nirvana of everything working across everything is one of those goals that will probably never quite exist." **46970**

Brandel is a Computerworld *contributing writer in Grand Rapids, Mich. Contact her at mary.brandel@comcast.net.*

VENDORS ANSWER BACK

IBM, HP and Sun address customers' top concerns about on-demand:

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THE Skeptics

Not all users are ready to gamble on on-demand computing. Here's a look at the top reasons IT managers are reluctant to pursue this new model.

BY MATT HAMBLEN

DESPITE THE VENDOR BUZZ surrounding on-demand computing, many IT managers have been left scratching their heads, wondering exactly how this model might benefit their businesses.

"[Users] like the concept," says Corey Ferengul, an analyst at Meta Group Inc. "However, it's so big, so hard to grasp that it seems unattainable and comes across as marketing. All the right words are there; now the users require translation to action."

In fact, a recent *Computerworld* online survey of 765 IT professionals shows that 50% are somewhat skeptical and 14% are very skeptical about the future of on-demand computing models. Their top concerns? The most-often cited was cost, followed by the fear of getting locked into proprietary vendor systems and, finally, security. Other IT managers say they worry about turning over control to an outside service provider or another business unit in their organization.

CONCERN: Cost

Damien Bean, vice president of corporate systems at Hilton Hotels Corp. in Beverly Hills, Calif., points out that with hardware costs so low, users can simply buy their own servers to meet peak demand.

"It's cheaper for me to buy another box rather than worrying about configuration changes," notes Bean. "When I look at the economics of operating big systems, hardware is no longer a great constraint. If hardware is not a large component of the cost structure, is doing all the negotiation and putting everything in a shared physical environment worth it?"

Hilton Hotels' Damien Bean says hardware is cheap, so why bother signing an agreement to buy it from one vendor?

MANUELLO PAGANELLI

Dee Taylor, IT manager at Trace Die Cast Inc. in Bowling Green, Ky., agrees. "With the price of servers today, you can really afford to have some extra," he says.

But many analysts and vendors argue that cost savings will be realized if companies increase capacity only 20% by pooling servers to crunch computing jobs consecutively. And those savings, proponents say, will come primarily from reduced labor to maintain the systems — and not necessarily from lower hardware costs.

That argument doesn't ring true for Hugh Honts, network operations manager for the Marion County Board of Commissioners in Ocala, Fla. "Servers are so cheap now, and Microsoft has finally come out with free or inexpensive tools such as [Microsoft Operations Manager]. So why would you do something so complex as grid or on-demand computing?" he asks.

"It wouldn't surprise me that [on-demand] is another way for hardware and software vendors to make money," Honts adds. In fact, several analysts agree that drastically declining costs of processors and servers have forced hardware makers to find other revenue streams, such as management software to handle on-demand computing.

CONCERN: Vendor Lock-in

Some IT managers are more worried that on-demand computing could restrict interoperability and flexibility. "That would be a big concern for us," says Chris Diorio, business intelligence architect at United Parcel Service Inc. in Atlanta. "I'd worry you'd be locked into a single vendor, with everything depending upon them."

For example, Diorio says, Microsoft Corp. has a "history of not making things interoperable, so that nobody else can use the products." He says he's concerned that there could be a similar problem with on-demand providers.

"On-demand solutions so far have been proprietary . . . and the lack of interoperability has been a big concern," says Tony Catone, director of systems architecture at Philadelphia Stock Exchange Inc. The exchange is guided by application development, independent of hardware and platforms, which means that it must have a high degree of interoperability, he says. "Interoperability allows our developers to have choice and to be nimble," and a single vendor with an on-demand approach might not respect that, he says.

Catone adds that he uses Hewlett-Packard Co.'s OpenView software but is leery of the vendor's Utility Data Center concept "because it means you are locked into HP products."

Catone says he's glad to see vendors such as Veritas Inc. touting more interoperability for on-demand storage and server capability.

CONCERN: Security

Taylor says security worries would stop him from working with a service provider for a complex on-demand system. "If my data is kept on the provider's machines, then I have no way to know what or how that data is being protected," he says. "Also, I don't like the idea of trusting a provider to stay out of my data."

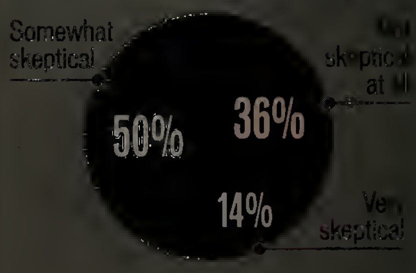
Sharing compute time with other companies poses a risk of data leakage, Diorio says. "The problem is that there is always a way around security," he says. UPS would probably never use a system that shares resources with other companies, Diorio adds, because of security worries.

For the Philadelphia Stock Exchange, security is paramount, with tens of thousands of trades being processed each second, says Catone. "We would need to understand in great detail the security architecture of any on-demand service provider," he says. "We're conservative, and there's a lot of concern that if you didn't control all the points of ingress to our systems, that it would be too tempting a target for maliciously inclined people to launch nefarious exploits."

Skepticism aside, more than half of the survey respondents said they expect on-demand computing to have an impact on their businesses in the next few years. And 30% have budgeted funds for on-demand technologies or services through 2005. 46969

User Qualms

How would you describe your level of skepticism about the future of [illegible] on-demand computing models?



What are your top concerns about the impact of on-demand computing models on your IT organization?

Cost of services	16%
Proprietary technologies and lack of interoperability will lead to vendor lock-in	16%
Lack of security	12%
Implementation will be too complex	11%
Inability to adequately monitor service-level agreements and meter usage	11%
Applications will have to be rewritten to see benefits	10%
Vendor wouldn't understand my company's business processes or vertical industry needs	9%
Displacement of internal IT staff	8%
Wouldn't meet our computing capacity needs at peak times	6%

[illegible]

A CONTRARIAN VIEW

Hilton Hotels' Damien Bean sounds off on the pitfalls of on-demand computing:

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SNAPSHOTS

Buzzword Evaluation

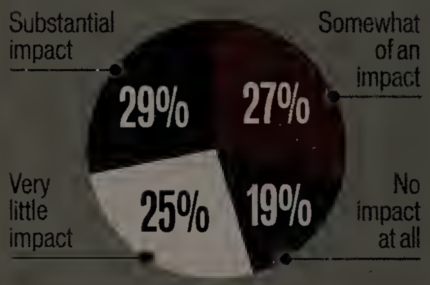
Which of the following technology strategies will be most important to your organization in the coming year?

On-demand computing	29%
Utility computing	12%
Adaptive computing	11%
Grid computing	9%
All of the above	14%
None of the above	26%

NOTE: Total exceeds 100% due to rounding.

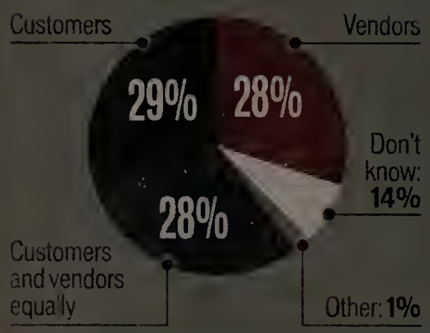
Predicting the Impact

How much impact will on-demand computing models have on your operation in the next few years?



Who Really Benefits?

In your opinion, on-demand technologies or services will benefit which group the most?



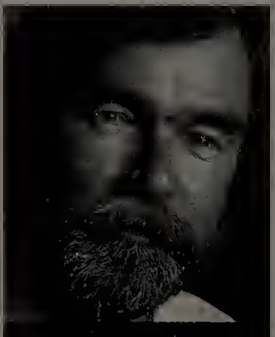
BASE: Online survey of 765 IT professionals
SOURCE: *Computerworld*, spring 2004

MARK HALL

Destination Desktop

BACK IN 1985, I shoehorned my way into a room packed with Sun Microsystems engineers to listen to company co-founder Bill Joy talk about on-demand computing. He was one of the earliest thinkers on the subject. Of course, that's not what he was calling it back then. And he wasn't talking about servers with capacity on demand either. His ideas revolved around how to exploit all those idle MIPS on desktop workstations, which was all Sun made at the time.

Nearly 20 years later Sun, IBM, Hewlett-Packard and other vendors are touting on-demand computing as an advanced server-centric technology that can help manage peak-and-valley processing-load problems while keeping costs down. Each vendor has its own technical approach (and terminology) for how servers can be leveraged in an on-demand model. But they're not talking about desktops any longer. And that's a shame, because there are still some interesting applications where the on-demand model works well for workstations.



MARK HALL is a *Computerworld* editor at large. Contact him at mark_hall@computerworld.com.

For example, Greg Bolcer, chief technology officer and founder of Endeavors Technology Inc. in Irvine, Calif., says providing Windows applications on demand would be ideal for things such as user training or application testing.

"It makes no sense to install a full application on a desktop if the user isn't going to be working with it for an extended period of time," says Bolcer.

And he's right. That's why he came up with AppExpress. It streams Windows software to PCs on an as-needed basis. According to Bolcer, it takes as little as 1% and no more than 10% of an application to be loaded on a Windows system before the operating system (with the help of an AppExpress agent) can launch it while the rest of the bits are flowing down the wire. That means users can start working almost immediately.

AppExpress might also appeal to IT managers who want to ensure that all of their users are working with the same release of an application. Instead of the IT department remotely loading desktops with software that users might spiff up with plug-ins or updates from CDs, every user can load the same version of an application from a single server that's centrally managed. Bolcer claims it works with both commercial products and custom applications.

Another on-demand computing tool is peer-to-peer software. Yes, it can be the bane of your existence if some of your users are hip music lovers who continue to flaunt copyright laws and chew up network bandwidth exchanging MP3 files. But peer-to-peer can be applied cleverly to benefit your users.

Or so thinks Marty Lafferty, CEO of the Distributed Computing Industry Association in Arlington, Va. His group's goal is to legitimize the now-stigmatized file-sharing protocol in the eyes of the entertainment industry so that more content will be made available to peer-to-peer users. While that's a Promethean task given the Luddite mentality of most entertainment executives, he may actually get more immediate traction with IT vendors that can leverage the protocol for knowledge-based applications.

Peer-to-peer, Lafferty suggests, is "an ideal protocol for the discovery and delivery of content." With it, knowledge management applications and search engines will be able to reach "the next level" of capability, he says.

Imagine a peer-to-peer application running inside a pharmaceutical company's R&D department. Each time one researcher learns something from an experiment, the results can be automatically provided to other interested scientists. Although there are knowledge management systems that do similar things today, they are tough to implement, difficult to manage and expensive to deploy. Peer-to-peer is a straightforward, open protocol anyone can use.

Both Bolcer and Lafferty are grateful that the big vendors are endlessly bending your ear with chatter about the advantages of on-demand computing.

"We're riding that wave," Bolcer says. "It's nice not having to educate users on the benefits of on-demand computing."

However, before advocates of on-demand computing for desktops ride the crest of that wave inside IT departments, they'll need to apply the system management discipline common among server vendors. For one thing, they'll need to factor in complex corporate security requirements, which are easier to manage on servers than on individual desktops. Managing bandwidth for on-demand purposes that emanate from desktops is tougher than controlling it from servers.

That's why we're seeing so much of the on-demand excitement and development on these centralized server systems.

Still, the server vendors are ignoring the beginning of the on-demand computing story: the part that begins on your desktop. **47259**

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WAGE: $101,000/year
Hours worked: Monday-Friday 9:00am-5:00pm

MINIMUM REQUIREMENTS:
Bachelor's degree or equivalent in Computer Science, Engineering (any type), Math, Business Administration or Management (any type) + 4 years exp. in the job offered or 4 years exp. as a Manager, Senior Consultant or Consultant. Related experience must include at least one year of experience with large scale systems development, interface architecture using n-Tier architecture, implementation of FACETS applications, data modeling tools (ER Studio and ERWIN), and object oriented techniques (UML). Knowledge of Financial Services and Healthcare industries required. Employer will regard a foreign degree to be equivalent to a U.S. Bachelor's degree as determined by an accredited credentials evaluation service.

Please send your resume, referencing Job Order Number WEB428255 to the: PA Careerlink, FLC Unit, 235 W. Chelten Ave., Philadelphia, PA 19144. EOE.

IT PROFESSIONALS

Senior Consultant

(Glen Mills, PA and other locations throughout the United States). Analyze the operations and supply chain processes of clients in the Banking industry, and develop strategies to reduce costs in a number of back office areas such as statement print and fulfillment, print sourcing, and statement strategy. Make recommendations to upper management regarding the "make versus buy" decision and assess statement standardization possibilities and their impact on the overall cost of statement production (from statement form sourcing to statement printing). Analyze the print strategies of clients and develop recommendations to streamline print purchasing decisions, standardize print materials usage and derive other print related efficiency improvements. Develop and utilize custom financial models, and perform strategic sourcing implementations of a wide spectrum of spend categories such as paper, print, and networking services. Implement and develop Requests for Proposals (RFP's) as the basis for sourcing initiatives covering distinct spend categories such as forms, envelopes, print & fulfillment services and networking services, evaluate the RFP responses in selecting the best all-around solutions based on both cost and conformity to technical and operational specifications, and participate in contract negotiations.

The wage offered is $80,750/year. The work schedule is Monday-Friday 9:00am-5:00pm. The minimum requirements are as follows: Bachelor's degree in Business Administration, Information Systems, Mathematics, Engineering (any), Computer Science, Economics or Management plus 4 years experience in the job offered or 4 years experience as a Senior Consultant, Consultant, or Financial Analyst. Related experience must also include at least six months of Analysis of cost reduction and supply chain processes in the Banking industry; Print Strategy Analysis and Development; development of custom financial models; implementation of Strategic Sourcing; and implementation and development of Requests for Proposals (RFP).

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IT PROFESSIONALS:

POSITION: Consultant (Glen Mills, Pennsylvania and other locations through the U.S.). Identify functional areas for performance testing of the Membership and Claims systems developed for a major healthcare client. Involved in testing various components including the Trizetto Facet's package, Sybase, Oracle databases, Citrix, Batch Programs, Online Applications, Client letter software, Crystal Reports, IPD (Image Process Design), HIPAA gateway software and E-Facets (web component of Trizetto Facets).Tested Citrix, Online Applications, Client letter software and Databases using Rational Test Manager and Mercury Interactive. Create automated test scripts and define testing scenarios using Rational Tool Suite (Rational Robot and Rational Test Manager) for testing facets and affiliated Extensions. Managed the execution of test scripts across multiple test environments and created virtual users and test scenarios using Rational Test Manager. Responsible for testing systems distributed over a wide geographic area and monitoring systems network performance and server load from various locations.

WAGE: $75,780/year
Hours worked: Monday-Friday 9:00am-5:00pm

MINIMUM REQUIREMENTS:
Bachelor's degree or equivalent in Computer Science, Engineering (any type), Math, Business Administration or Information Systems + 1 year exp. in the job offered or 1 year exp. as a Systems Analyst, Consultant or Senior Consultant. Related experience must include testing of systems distributed over a wide geographic area and defining testing tools using the Rational Testing Tool Suite. Knowledge of the healthcare Industry required. Employer will regard a foreign degree to be equivalent to a U.S. Bachelor's degree as determined by an accredited credentials evaluation service.

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SOFTWARE ENGINEER
(Two Openings)

Research, dasign & dvlp comp. software sys. Analyze software reqmnts to determine feasibility of dsgn w/in time & cost constraints. Consult w/clients to define needs or problems. Use C, FOXPRO, Dbase, Oracle 7.3, Powerbuilder & Developer 2000. Bach. degree in Comp. Sci., Comp. Engnrg, Business or related field of study + 2 yrs exp. as a Software Engnr, Prog./Analyst, Sys. Analyst or Software Consultant reqd. Exp. must include dsgng & dvlpng computer programs & include use of: (a) RDBMS: Oracle 7.3; (b) Languages: C; (c) FOXPRO, Dbase, Powerbuilder & Developer 2000. High mobility. Various worksites throughout U.S. 40 hrs/wk, 9am-5:30 pm, $85,000/yr. Application is by resume only. Please submit resume to: Workforce Development Programs, P.O. Box 46547, Denver, CO 80202. Please refer to Job Order No. CO5082148.

Senior iSeries Systems Engineers - Requires Bachelor's or equivalent in Computer Science or a related field & five years experience in the job offered &/or in Computer Information Systems/Technology with 3 years of the experience being in Systems Engineering. In lieu of the BS+5 yrs, Employer will accept 8 years of experience in Computer Information Systems/Technology, with 3 years of the experience being in Systems Engineering. A minimum of 18 months of TCP/IP & SNA communications on the iSeries is essential. Must have the following certifications: IBM LPAR Expert & iSeries Technical Solutions Expert, IBM iSeries Technical Solutions Design V5R2 & iSeries.IBM Technical Solutions Implementation V5R2, MIMIX V4R4.Networking.

Competitive Salary & Benefits. Contact: Recruiting, Premise Inc, 4904 Creekside Drive, Clearwater, FL 33760, Robert Nowels@premiseinc.com.

Data Communications Analyst

Full time position available with OB/GYN ofc. Help with IT/HIPAA changes. Medware & CPT/ICD-9 knowledge req'd. Job located in Kissimmee, FL. Fax resume with salary req'ments to Alpha Center for Women's Health 407-944-9070. Attn: Joan.

SYSTEMS ANALYST - Analyzes user requirements, procedures and problems to automate processing or to improve existing computer systems. BS in CS or Engg or math-related and 2 yrs. exp. in job offered. Must be able to travel. Incl. in the 2 yrs., must have 2 yrs. exp. with various computer skill sets such as OOP/OOD with C/C++, C#, ASP /VB/ADO.NET, Servlets, Jtgo, jsp, Rational Rose, RMI, CORBA, Brio Reports, NoetixViews, VisiBroker, Voice Apps using VXML, Nuance, Sax/Dom, XSL, UML/RUP, COM/DCOM, ATL, ClaarCase, WebLogic, WebSphere, SQLServer, Oracle, CrystalReports, Visio, Erwin, VMS. 40 Hrs./wk. 9 to 5, Mon-Fri; No overtime. $57,450/yr. Apply resume to Attn HR, Capricorn Systems, Inc. 3569 Habersham-at-Northlake, Building K, Tucker, GA 30084.

Programmer Analyst, wanted by IT Company in Chicago. Bachelors in Engineering + 1 year experience in design, install, & administer of databases in Oracle on Unix & Windows NT; data modeling using ERWIN, logical and physical design of databases; design & develop applications in C/C++, Pro*C; coding of Triggers and stored procedures using PL/SQL, loading using SQL Loader; monitor databases using SQL Lab, I/WATCH, Space Manager; responsible for backup and recovery of systems; writing Shell and Perl Scripts; configure standby & multi master replication of databases; performance tuning of databases and applications by optimizing SQL, PL/SQL code. Send Resume to Anthem Technologies, Inc., 1444 North Farnsworth Ave Suite 106; Aurora, IL 60505.

Software Engineer

Analyze, design, develop, test and deploy Multi-Tier Enterprise Application using Java, J2EE, Swing, JDBC, Servlet, EJB, JUnit, XML and UML. Req. Master's degree in Comp. Sci. or related field, at least 1-yr exp. designing and developing commercial grade software and proficiency in Java, Swing, EJB and J2EE. 40 hrs/wk. Send resume with Ref# SE04 to ComeFrame Software, 110 12th St. N, Birmingham, AL 35203. Fax (205) 314-3415.

Computers - Seeking qualified candidates for senior & mid-level IT professional positions including: Network Administrators, Database Administrators, Software Engineers. Qual. candidates must possess MS/BS or equiv. and/or rel. work exp. Database Administrator positions require at least 1 year working with Oracle Applications/ RDBMS. Duties include: Work with 3 of the following: Oracle, PL/SQL, Sun Solaris, UNIX Shell Scripts, Veritas products, UNIX. Fwd resume & references to: Core Services Corporation, Attn: HR, 610 Rahway Avenue, 2nd Floor, Union, NJ 07083.

Database Admin. (Forest Park, GA): design, code, test & implement physical databases; Manage co. network, web server & all applications; Train users in using new & existing databases. Responsible for all new computer & phone h/ware procurement, maintenance, & daily system backups. Req: Bachelors (or foreign equiv.) in Comp. Sci., Math, or related + 2yrs in job or as Network Admin. or Programmer/Analyst. Send resume: Sunny Wholesale, 120 Forest Perkway, Forest Park, GA 30297.

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Computers - Citigroup, Inc. Stamford, CT) seeks Software Engineers/Developers, Prog. Analysts/Admins, Project Mgrs/Leaders, DB Architects, QA Engineers w/BS or MS in Comp. Sci., Engin., Math, Stats, IT, Electronics, CIS, MIS, Bus. Admin. or related quantitative field or equiv. combo. of work exp. & educ., &/or exp. in any above or similar positions. Exp. in any of the following: UNIX, AIX, Sun/Solaris, PL/SQL, Sybase, Oracle, C++, ProC, VB, ASP, Visual Interdev, Java, JevaScript, J2EE, Oracle, Netscape, MS IIS, Shell Scripting, HTML, Fox Pro, Perl, Windows NT, Networking, Security tools, QC, Encryption Tools, CASE tools, e-Commerce technologies. Forward resume to Attn: DT, 100 First StamfordPlace, Stamford, CT 06902. No calls orfaxes, please. EOE. M/F/D/V.

PROGRAMMER ANALYSTS for Reston, VA office. Design & Develop software applications using Oracle, Sybase, XML, Coolgen, Interwoven, ClearCase, ClearQuest, Plumtree, PVCS, UNIX. Bachelors or Equivalent req'd in Computers, Engineering, Math or any related field of study + 2 yrs of related exp. 40 hrs/wk. Must have legal authority to work permanently in the U.S. Contact HR Manager, HITEC Information & Technologies, Inc., 12007 Sunrise Valley Dr, Reston,VA, 20191.

NetSoft Tech has openings for IT professionals to design applications using CICS, MVS, JCL, VSAM & DB2, HTML, Java, PWB, IIS, JDBC, ASP, JavaScript, XML, C/C++, Oracle. Applicants must have BS/MS or equivalent. Travel maybe required. Apply at jobs@nstc.net. EOE.

Bauer Associates is looking for software engineers to develop software programmer for multiprocessors system, implement device drivers under VRTX-32 on VME platform, develop NVH algorithms. MS/BS with experience is minimum requirement. Contact jobs@bauercontrols.com. EOE.

Chief Information Officer for a medical transport software facility in San Diego. Must have a degree BSc in computer software engineering or equivalent & relevant industry & CIO experience. Send resume to Golden Hour Data Systems, Inc., 312 South Cedros Ave., Solana Beach, CA 92075 or email humanresources@goldenhourdata.com.

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Software Engineer sought by company that provides network computing storage in Louisville, CO to work in Louisville and other unanticipated job sites in the US. Develop and implement unit and system level manufacturing software, process and methods in the tape advanced manufacturing engineering division for a company that manufactures computer storage devices. Using Oracle database development and application development tools, develop parametric software for tape performance testing. Using Oracle tools including reporting tools, Developer 2000, and Reports 2.5, as well as Pro-C and PL/SQL in a Unix environment, design, implement, maintain and oversee backup recovery through Oracle database administration. Use test data obtained by engineering staff to create statistical charts to show performance of and to analyze test data for tape drives. Requires 3 yrs as a software engineer, including at least 2 years as a developer on Oracle databases. Working knowledge of Unix, Pro-C, PL/SQL and Oracle tools including reporting tools, Developer 2000 and Reports 2.5. 8am-5pm, M-F; $71,807.65/yr. Respond by resume to Employment Programs, PO Box 46547, Denver, CO 80202 and refer to CO5081813.

Jr. Programmers, Programmers, Software Engineers & DBAs: Analyze, design & develop specialized apps. In (a) Oracle, Erwin, Informix, Delphi, Toad, Borland & rel. tools; (b) Clarify & rel. tech., Clear Basic, VB, SQL Server, Access, Oracle, Java & rel. tools; (c) IBM ISeries - ILE RPG CLP/400, COBOL/400 with case tools PROGEN, CRM/400, SMART/400; (d) Visual C++, TCP/IP, Bounds Checker, Olectra, SQL server & rel. tools; (e) MS.Net technologies, MIS, IIS, SQL Server, Commerce Server 2000; (f) Oracle Apps./DBA - Erwin, DB Artisan, Unicenter DBA, TOAD, Oracle & rel. tools; (g) MS.Net technologies, Citrix, Sybase, C, Lotus Notes, Oracle & rel. tech. Send resume to STS, Inc., HR, 2021 Fox Valley Drive SW, Rochester, MN 55902, identifying interested position(s). EOE.

Architect/Lead wanted by electronic license management services co. Requires B.S. in Comp. Sci. plus 8 yrs. exp. Reply by resume to Open Channel Solutions, Attn: HR, 1400 Providence Highway, Norwood, MA 02062.

PeopleSoft Programmer

2 yrs. technical exp. in PeopleSoft. Develop interfaces/reports using People Tools. PeopleCode on HRMS/Fin/Distrib modules. BS (Computer Science) or equiv. pref. Mail resumes:

Navo Systems
1506 Providence Hwy # 29
Norwood, MA 02062

Software Engineer: Multiple openings Develop, analyze, maintain software applications using C#, ASp.Net, ASP, XML/XSLT, XPath, Visual Studio, SQL Server, Java, J2EE, HTML, EJB, Javascript, UNIX, Oracle, etc. provide software support,systems re-engineering, database re-design. Salary: $86,200/yr. Must have Master's Degree or foreign equiv. in Computer Sc./Engineering/Math or equiv. and 2 to 4 yrs of exp. in job offered or related job as Programmer/Systems Analyst/Developer. Send resume to Job Order #2004-211/212/213, P.O. Box 989, Concord, NH 03302-0989.

Programmer/Systems Analyst: Multiple Openings Develop, analyze, maintain software applications using ASP, XML/XSLT, SQL Server, Java, J2EE, HTML, EJB, Javascript, UNIX, Oracle, etc. provide software support, systems re-engineering, database re-design. Salary: $80,900/yr. Must have Master's Degree or foreign equiv. in Computer Sc./ Engineering/Technology or equiv. and 2 yrs of exp. In job offered Send resume to Job Order #2004-333/666, Box 989, Concord, NH 03302-0989.

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- COM, DCOM • JSP • HTML
- JAVA, JAVA BEAN • EJB JAVA SERVLETS • WEBSPHERE
- IBM MQ SERIES • XML,UML
- MTS • CLARIFY • PERL
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SAP Consultants/Software Engineers needed. Sev. positions available for candidates possessing MS/BS or equivalent and/or relevant work experience. Part of the req. rel. exp. must include either 2 yrs. with SAP and ABAP/4 or 3 yrs. with SAP. Mail resume, references and salary requirements to: Seal Consulting, Inc., 101 Fieldcrest Avenue, Raritan Plaza III, Edison, NJ 08837.

Systems Analyst sought by Computer Consulting Co. Bachelor's in Comp Sci or Eng. or foreign equivalent, or a combination of education and work exp. equal to a U.S. Bachelor's degree, plus 2 yrs. exp. inc. ERWin and Teradata are required. Resumes to UPP Business Systems, 3075 Highland Pkwy #730, Downers Grove, IL 60515.

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Software Engineers: Consultants needed for database programming, Internet programming or Systems side programming. Will help clients design, develop, program, and test software implemented on client server technology. The main technologies involved are databases (Oracle), datawarehousing tools (Business objects, Informatica, Cognos), and Internet programming languages (Java, JDBC) or System programming languages (C and C++). Must 5 yrs. exp. as software engineer or in a related field.

Unix Administrators: Consultants also needed for network implementation and administration, system integration, backup, and recoveries, shell scripting and system securities. Knowledge of management of enterprise network storages devices (SAN and NAS), HP and Solaris Serves, Swithches, HUBs and in Veritas Neb-Backup Systems. 5 yrs. experience as Unix Systems Administrator or related field.

Req. for both positions: Clients are located in 9 states. Candidates must be willing to move from location to location for assignment durations that varies from 3 mos. to year. Email CV to rtroff@tnscinc.com, Rona Troff, HR Mgr of TechNation Software Consulting, Inc., or mail to 300 N. Dakota Avenue, #505B, Sioux Falls, SD 57104.

Software Engineer

Disclosure Source is one of the Fidelity National Financial companies which provide real estate hazard, risk, value, insurability, title and other automated report services to customers over the Internet. DS seeks a Software Engineer to develop/implement/support program components for applications, servers and databases; update source code via remote access; monitor/troubleshoot performance. Reqd experience to include Windows multi-tier environment, SQL Server, COM/DCOM, XML, ASP, ERWin, VS Enterprise, and real-estate industry IT. May work from home, anywhere in U.S. (phone/modem expenses reimbursed). Principals only. Must be authorized to work in U.S. w/out employer sponsorship. Mail or FAX resume to: A. Manvelyan /Re: SM, Disclosure Source, 3100 New York Drive #100, Pasadena CA 91107. Fax 626-345-2334. EOE

Web Content Specialist - Candidates will assist in the analysis, design, development, preparation and maintenance on client web sites and applications; Work in conjunction with clients to maintain and update content contained on their web sites; Responsible for maintaining, managing and enhancing search engine rankings through the use of registration and organizational tools; Utilize HTML editing skills in the maintenance of client sites; Utilize file transferring techniques and web site content management skills in the development and maintenance of client sites; Identifying and assessing areas of client sites requiring content updates; Work with clients to identify new opportunities for content creation. High School is required. Applicants must have one year training in Windows, HTML, Microsoft Office and Desktop Publishing. 40 Hrs./wk. (9:00 A.M to 5:00 P.M.); $35,000.00 per year. Located in Wilmette, Illinois. Applicants must show proof of legal authority to work in the U.S. Send resumes to ILLINOIS DEPARTMENT OF EMPLOYMENT SECURITY, 401 South State Street - 7 North, Chicago, Illinois 60605. Attention: Brenda Kelly. Reference # V-IL 35585-K. AN EMPLOYER PAID AD. NO CALLS - SEND 2 COPIES OF BOTH RESUME AND COVER LETTER.

IT Operations Manager

Java Developer reqd to continue ongoing dvlpmt & mgmt of CLEC's Workflow & Communication Systems. BS or BE in Communication Engg or Comp Sci & min 3 yrs exp in following skills: Object Oriented Analysis & Design, Java 1.4(J2SE), J2EE 1.4 dvlpmt (EJB, Servlets, JSP, MVC), Orion Application Server, Dbase Dvlpmt (MS-SQL, SQL/PL-SQL, MySQL), Advanced HTML, Java Script & XML, Perl, Unix Scripting. Must have 6 mos-1yr exp with: TCP/IP protocols, Phone & Voicemail systems, Envox Applications Server, Envox Studio & Java RMI & CORBA. 9-6, 40hr/wk. Mail resume to: Mr. Fred J. Tips III, Carrera Communications, L.P., 211-A Brooklyn Ave., San Antonio, TX 78215. E-mail resumes to: careers@callcarrera.com.

Senior Consultant

(Glen Mills, PA and other locations throughout the United States). Analyze, design, develop and implement procurement practices and strategic sourcing solutions based on the Frictionless Commerce Sourcing (FCS) or Ariba Enterprise Spend Management (ESM) solution platforms for business clients. Design and develop supporting databases and applications to facilitate data analysis and modeling for use by FCS or ESM systems. Responsible for configuring and loading the technological environment to support the client's procurement and sourcing organization. Perform in-depth analysis of a client's existing sourcing and procurement process to identify complete technological requirements, infrastructure, interfaces, and conversion needs. Responsible for developing the supporting business case to implement new business processes and application redesign, developing components of plan deliverables and epplying best practices to the new design.

The wage offered is $80,421/year. The work schedule is Monday-Friday 9:00am-5:00pm. The minimum requirements are as follows: Bachelor's degree in Computer Science, Engineering (any), Math, Business Administration, Information Technology or Management (any) + 3 years experience in the job offered or 3 years experience as a Consultant, Procurement & Sourcing Technologist, or Application Developer. Related experience must include at least six months of Procurement practices and strategic sourcing solutions including category analysis, industry best practices, technology evaluation, and process redesign; Frictionless Commerce Sourcing (FCM) solution platforms; Ariba Enterprise Spend Manegement (ESM) solution; and developing and configuring FCS & ESM applications for clients.

Please send your resume, referencing Job Order Number WEB 428031 to the: PA CareerLink, FLC Unit, 235 W. Chelten Ave., Philadelphia, PA 19144. EOE.

Director Softw. Develop. - Direct dev./maint. of financ. trans. process. syst.; direct procur./dev. of softw/hardw syst.; dev. specs/req'mts; trans. specs/req'mts to design elem./data schema; use dBBApps/MS SQL/C#/ASP.NET & others to impl. syst.; direct syst./user test; direct tech. op.; hardw. config. for host. syst.; direct provision. serv./hardw., SQL data., web host/netwk config.; direct app. growth; supervise Engineers. Master's or equiv. Comp. Sci., Engin., or related req'd. Bachelor's Comp. Sci., Engin., related or acad. equiv. + 5 yrs progress. exp. in softw. engin. subs for Master's req'mt. Must be proficient in dBBApps/MS SQL/C#/ASP.NET. Competitive salary, 40 hrs/wk, OT as need. Send resume: J. Hayes, FTS, 1 Meca Way, Norcross, GA 30093.

IT Careers

Director of Merger/Acquisition Integration - Western New York based manufacturing company seeking top quality candidate requires BS, MBA preferred. 10+ years exp with mergers & acquisition integration experience essential to include assessment, business case development, planning & plan execution to include: Networks, servers, software implementation (oracle 11i, SAP, etc.) Excellent understanding of manufacturing financial, engineering, and HR applications. Travel required. Salary D.O.E., Excellent client benefits. Respond to Personnel Resource, Inc. via email prinorth@perresource.com Or fax 716-633-6779.

BCC USA Inc. - Portland, Maine needs experienced Programmer Analysts having a Bachelors degree with minimum two years of progressive work experience in RUP/UML, JAVA, J2EE, EJB, JMS, Enterprise Messaging, IBM MQSeries and CORBA. Competitive salary and benefits. M-F, 40 hours/week. Please mail your resume to BCC USA Inc., HR Department, 650 Main Street, Suite 201, South Portland, ME 04106.

Rock-Tenn Company, national paperboard and paperboard products manufacturer, is seeking qualified, degreed applicants with relevant experience as a software development team/project leader and familiarity with AS/400 and RPG to work in our Atlanta, Ga. office in the position of Chief Systems Analyst/Programmer. Interested applicants, e-mail resume and cover letter to jremling@rocktenn.com or mail to Jennifer Remling, Rock-Tenn Company, 504 Thrasher Street, Norcross, GA 30071 or fax to (678) 291-7575. EOE.

PROGRAMMER ANALYSTS for Cincinnati, OH office. Design & Develop software applications using Oracle, VB, Developer 2000, Designer 2000, DB2, Java, XML, UML, Coolgen, Interwoven Bachelors or Equivalent req'd in Computers, Engineering, Math or any related field of study + 2 yrs of related exp. 40 hrs/wk. Must have legal authority to work permanently in the U.S. Contact HR Manager, Downtown Property Management, Inc., 8322 Arborcrest Dr, Cincinnati, OH 45236.

Employment Opportunities!

Friendly Consultants, Inc has openings for locations nationwide for computer professionals experienced in systems and/or management analysis, systems design, data modeling, networks Integration and e-commerce ap-plications with hardware and/or software skills including: Java, Magnax, VB, ASP, Crystal Reports, Oracle, SQL/PL/SQL, Power Builder, COBOL, CICS, VSAM,DB2, Seer HPS,Win NT, Unix, C, C++, Linux, TCP/IP, PERL, Internet/Intranet, SAP, PeopleSoft, XML, Testing. Junior level positions require bachelors plus 1 - 3 years of experience. Senior level positions require bachelors + 5 years experience or Master's + 2 years of experience. Relocation and/or travel possible. Top $. Send resume to HR Dept at: 55 Princeton Hightstown Road, Suite 205B, Princeton Junction, NJ 08550 or email to: hrd@friendlyconsultants.com.

SYSTEMS ANALYST

Analyzes user requirements, procedures and problems to automate processing or to improve existing computer systems. Extensive Travel involved. Bachelor's Degree in Computer Science, Engineering, or math-related and 10 months experience required in job offered or in analysis, design development and implementation of various I.T. application required. Included in the 10 month's job exp. Java 2.0, Servlets, JSP, RMI, EJB, OOAD with rational Rose, UML, XML, XSL, XLINK, Dreamweaver, Net Dynamics, Cold Fusion, WebLogic, WebSphere reqd. Apply by resume only to Murali Suddala, President, Capricom Systems, Inc., 3569 Habersham-at-Northlake, Building K, Tucker, GA 30084.

BCC USA Inc. - Portland, Maine needs experienced Programmer Analysts having a Bachelors degree with minimum two years of progressive work experience in Java, J2EE, Weblogic, ILog, JRules, WebLogic Process Integrator and IBM MQ Series. Competitive salary and benefits. M-F, 40 hours/week. Please mail your resume to BCC USA Inc., HR Department, 650 Main Street, Suite 201, South Portland, ME 04106.

Ross Systems has an opening for a Technical Consultant. The position requires a bachelor degree or foreign degree equiv. in CS or related and a min. of 3 years DBA experience (including DB migration, architecture, and design) in multiple platforms and configurations. Ross Systems, Inc., Attention: Mgr, Employee Services, 2 Concourse Parkway, Suite 800, Atlanta, GA 30328. EOE. No Calls, Emails or Faxes.

PROGRAMMER ANALYSTS for Chicago,IL and Fairfax, VA offices. Develop & maintain software applications using J2EE, MKS, Rational Rose, Interwoven, Coolgen, ClearCase, ClearQuest, Rapidigm, Tuxedo, Tango, Eclipse. Bachelors or Equivalent Degree reqrd In Computers, Engineering or related filed + 2yrs of related exp. 40 hrs/wk; Must have legal authority to work permanently in the U.S. Send resume to HR Manager, Vigna Solutions, Inc. 70 West Madison, Suite #1400 Chicago IL-60602.

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IT consulting firm located in Vermont has multiple openings for programmer analysts to serve multiple clients throughout the U.S. Job duties include: Analysis, design, development and testing of computer applications. Specific skill sets needed include:

- Mainframe developers with experience in COBOL, DB2, SQL, IMS DB, Easytrieve, and QMF
- .Net developers
- Java/.J2EE developers
- Peoplesoft Developers
- QA Testers

Send resumes with salary requirement to: vt@iTechUS.com Applicants must have authority to work permanently in the U.S.

IT ERP Programmer/Engineer II (with Bachelor's degree and 4 years of experience or Associate's degree plus 6 years of experience) - Job entails and requires experience in analysis, design, configuration, testing, maintenance and support commercial solutions using SAP R/3, FI-GL, FI-SGL, CO, ECCS, CCA, PCA, FI-AM, ABAP query and SAPscript Design. Experience must include team leadership. Attractive compensation package. Post resume on www.discovery.com, click on About our Company.

Multiple openings for software engineers to design, develop and test computer programs for business applications; analyze software requirements to determine feasibility of design; direct software system testing procedures using expertise in EJB, Eclipse, JBoss, Oracle, JUnit, Cactus and XDE. Requirements: Bachelor's Degree, educational or functional (3 years work experience=1 year college) equivalent in Computer Science or related field and two years experience as a software engineer or computer programmer, knowledge of EJB, Eclipse, JBoss, Oracle, JUnit, Cactus and XDE. Salary: $70,242/year. Working Conditions: 8:00 A.M. to 5:00 P.M., 40 hours/week, involves extensive travel and frequent relocation. Apply: BECS/ CareerLink Program Supervisor, Indiana County CareerLink, 300 Indian Springs Road, Indiana, PA 15701, Job No. WEB430246.

Software Engineer needed in Temple Terrace, FL, to perform software development for provisioning, activation, and inventory functions to support service order processing for telecommunications industry; investigate and resolve complex software issues; plan, consult, configure, implement, test, demonstrate, deploy and maintain multi-tier operational support software; responsible for data modeling, business process definition, system administration and network troubleshooting. Requires Bachelors in Computer Engineering, Computer Science or Electrical Engineering, plus either 5 yrs exp in job offered or 5 yrs exp in software development including 3 years utilizing the following: Java, C++, SQL, Socket programming and UNIX internals. Salary $93,600/yr, Mon-Fri, 8AM-5PM, 40 hrs/wk. Send resume to Workforce Program Support, P.O. Box 10869, Tallahassee, FL 32302-0869, refer to J.O. # FL-2527533.

Software engineer to design, develop and test computer programs for business applications; analyze software requirements to determine feasibility of design; direct software system testing procedures using expertise in WebSphere, Oracle, EJB and Corba. Requirements: Bachelor's Degree, educational or functional (3 years work experience=1 year college) equivalent, in Computer Science or related field and two years experience as a software engineer or computer programmer, knowledge of WebSphere, Oracle, EJB and Corba. Salary: $70,242/year. Working Conditions: 8:00 A.M. to 5:00 P.M., 40 hours/week, involves extensive travel and frequent relocation. Apply: Site Administrator, Greene County CareerLink, 4 West High Street, Waynesburg, PA 15370, Job No. WEB430243.

Computer

Household International, headquartered in Prospect Heights, IL, has an opening for a Consultant Business Systems working in our various branch offices throughout the nation.

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Multiple System Engineer Positions - Must have a Bachelor of Science degree or the Foreign Equivalent in Information Technology or related. Must have 8 years of experience in the job offered.

The job requires the ability to prepare project specifications and statements of probability and procedures to create or modify computer programs; prepare work flowcharts and diagrams using business and engineering analysis; resolve questions of programming intent, data input/output requirements, and inclusion of internal checks and controls; convert detailed, logical flowcharts to language process-able by computers; input test data into computer systems; analyze, review, and rewrite programs to increase operating efficiency or adapting programming to new requirements.

The job requires over 5 years of experience with Java, XML, XSL, XSLT, J2EE (EJB, JSP, Servlets, Struts), JavaScript, and DHTML including C++, Weblogic and Oracle databases. Applicants should be certified "Sun Certified Web Component Programmer"(SCWCD) and "Sun Certified Enterprise Architect" (SCEA).

Qualified applicants must send resume to S. Agrawala, Vector Consulting, 6455 East Johns Crossing, Suite 450, Duluth, GA 30097.

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HP Supports Identity Management in OpenView Line

BY MATT HAMBLEN

Hewlett-Packard Co. last week added an identity management product to its OpenView line of management tools, using technology that was acquired when it bought TruLogica Inc. in March.

The OpenView Select Identity software automates a wide range of identity and end-user access-control tasks, according to HP. It will be integrated with OpenView Select Access, which itself evolved from HP's purchase of Baltimore Technologies Inc. last September, said Select Access product manager Andrew Flint.

Select Identity gives IT managers the ability to centrally update an end user's permission to use technology resources, according to HP. Select Access, on the other hand, can be used to provide end users with single sign-on capabilities and access to federations of related Web sites, among other functions.

The University of Colorado at Boulder bought Select Access in February and plans to complete a rollout of the software in October, said Jon Giltner, director of IT analysis, architecture and security at the university. He added that the school's IT staffers are reviewing Select Identity and similar products from other vendors.

Giltner said Select Access offers clear benefits for 200 end-user departments at the school, but Select Identity would be a lower priority because it would only affect how efficiently the IT staff operates. Select Access will help automate authentication and authorization tasks across the university, he noted.

Pete Lindstrom, an analyst at Spire Security LLC in Malvern, Pa., said the addition of Select Identity shows that HP is trying to put together a well-rounded set of security management products that can compete with offerings from vendors such as IBM's Tivoli Software unit, Computer Associates International Inc. and BMC Software Inc.

Select Access starts at $21 per user for 1,000 seats and drops in price as the number of users increases. Select Identity starts at $75 per user for the same number of licenses. Both are available now, HP said. 47776

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Comdex

help determine how the show can best meet the industry's future needs.

That's a good idea, noted several IT executives who maintained that the show has lost its focus.

Eric Goldfarb, CIO at financial services company PRG-Schultz International Inc. in Atlanta, said a one-year hiatus is "prudent ... rather than killing the show completely from lack of support."

Philip Brody, chief technology officer for the Clark County School District in Nevada, said the absence of the show this year won't be a loss for him or his IT staff. "In the past, it had always been too big," he said. Last year, several staff members attended but were disappointed, Brody said.

"I was surprised but not disappointed when the event was canceled," said Ron Calderone, CIO at Liberty Corner, N.J.-based Reliant Pharmaceuticals Inc. "I have not attended the event in years. ... My preference would be the more targeted shows." Damien Bean, vice president of corporate systems at Hilton Hotels Corp. in Beverly Hills, Calif., said he was "disappointed" when he last attended Comdex two years ago. "As products mature ... the large conference format has diminishing returns," he said.

Industry-specific shows are more useful "because they are more application-oriented," said Randy James, CIO at Americo Life Inc. in Dallas. Jones added that although he has attended Comdex several times in recent years, he didn't plan to go in November.

Value Judgment

Others said they see value in Comdex and are dismayed by its cancellation.

Tsvi Gal, CIO at New York-based Warner Music Group, said he believes there's a need for shows like Comdex. "I do see value ... if the vendors take it seriously as 'the big event,'" he said. "It used to be the forum for announcements of new directions and new technologies. The vendors don't do it anymore, so it lost significant value there."

Henry Volkman, CIO and IT director at Lake Forest, Calif.-based restaurant chain Del Taco Inc., said he has "always found the show useful, even though most of us aren't able to implement the latest innovations where we work until they are almost old hat." General IT shows like Comdex are as valuable as more targeted shows, he said, "since the field gets more dynamic every year and continues to grow beyond anyone's ability to put it in one tent or a single event."

Dell spokesman Jess Blackburn said that his company hasn't had a major booth on the Comdex floor because "we just reached a determination several years ago that the trade-show format for us was not particularly effective."

Instead, Dell last year had several self-serve kiosks where attendees could order Dell computers. The company prefers to have more personalized meetings with customers in hotel suites outside the exhibit hall, Blackburn said.

Last year's Comdex was slimmed down and touted by MediaLive as a focused, business-to-business IT event instead of a glitzy consumer-oriented show. About 40,000 people attended last year, down from around 200,000 in its heyday in the 1990s.

Eric Faurot, general manager of Comdex, said a key to again making Comdex a must-see event is to get the major IT vendors back on the show floor so products can be compared more fully. "We're talking with everybody, and that's exactly what the [Comdex Advisory] Board is going to address," he said. "The reality is it takes time to get trust back." 47782

Comdex Advisory Board Takes Shape

MediaLive International is forming a Comdex Advisory Board to get advice from IT executives that it hopes will help turn the show's fortunes around in 2005.

Several appointees spoke with *Computerworld* last week about the job the group is preparing to undertake.

George Paolini, general manager for development tools at Borland Software Corp., said that while complete details of the mission being set out for the board aren't yet known, such advisory groups aren't unusual. Sun Microsystems Inc. has organized similar user and vendor boards for its JavaOne conferences, he said. MediaLive CEO Robert Priest-Heck is "trying to really assess what needs to be done ... to make it a success going forward," Paolini said.

Mark Fredrickson, a spokesman for storage vendor EMC Corp., said he will be there to share his company's vision of how Comdex could fit into EMC's future plans. For major vendors, he said, Comdex has become so large that "you have to ask yourself, are you getting incremental exposure to customers, or are you lending your name or presence to smaller companies? [The latter is] not of great interest to market leaders like EMC."

When the Comdex cancellation was announced last week, EMC hadn't yet made a decision about whether it would participate in this year's show, Fredrickson said. "But we liked their direction," he said, referring to the initial changes that MediaLive made after becoming Comdex's promoter last year.

Tom Pilla, a spokesman for Microsoft Corp., said his company was still evaluating its presence at this year's show when the event was canceled. Company co-founder Bill Gates has given the opening keynote at Comdex for 21 of the past 25 years, he said, and the company has had exhibit space on the floor.

One commitment is that Jeff Singsaas, Microsoft's director of events, will serve on the Comdex advisory board, Pilla said. "We're absolutely happy to participate," he said. "We'll see what comes out of it."

- Todd R. Weiss

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FRANK HAYES ▪ FRANKLY SPEAKING

Death to Comdex

THERE WON'T BE A COMDEX in Las Vegas this fall. That doesn't even sound surprising, does it? But it would have been unthinkable in 1995, when Comdex founder Sheldon Adelson cashed out for $864 million and used the money to build a Las Vegas hotel. Back then, everyone thought Comdex would keep going forever.

Today, Comdex has finally run out of gas. Its current owner canceled this year's show and is casting about for ways to make Comdex important to IT people again.

But their worst nightmare could be Adelson.

A year ago, Adelson smelled blood in the water. He was busily telling interviewers everything he thought was wrong with Comdex, which lost 40% of its attendance in 2001 and never recovered. Adelson said he was thinking about launching a trade show to compete head-to-head against Comdex — same week, same town, but it would be the show that Adelson believes Comdex should have become.

And that's no idle threat. Adelson controls his own hotel and convention center in Las Vegas — bought with Comdex profits. He's worth almost $2 billion. He's 70, but he's still the man who started Comdex 25 years ago and built it into the monster show it once was. If anyone can create a Comdex-killer, Adelson can.

Sounds a lot more interesting than reviving Comdex itself, doesn't it?

That's because Comdex really is past its prime. Look, trade shows rise, peak and then fall. From the mid-1980s until 2001, Comdex towered over the IT industry. It grew with the rise of PCs and the dealers who sold them — remember, Comdex was short for "Computer Dealers Exposition."

Before Comdex, the monster show was the National Computer Conference, a not-for-profit, volunteer-staffed event that was half trade show, half technical symposium. That made sense from the 1960s through the mid-'80s, when data processing departments leased their mainframes, wrote most of their own software and needed research papers as much as they needed buying guides.

The NCC peaked in 1983. But with the PC revolution, it no longer made sense. By 1988, it was gone. Comdex peaked in 1997. But somewhere along the line, it, too, stopped making sense. Sure, it was too big and impossible to navigate. But that had been true for a decade. Everybody complained, but they still came. Then they stopped coming. Now Comdex is dead in the water.

Can Comdex's owner save it? Yes — and no. MediaLive International probably *can* rescue its investment in what's still a valuable property. The company can save what was once its crown jewel from Adelson's Comdex-killer.

But only by killing Comdex.

Yes, it's a powerful brand. But today the negatives outweigh the positives. Both vendors and IT people hear Comdex and think of the PC-era show that has outlived its usefulness. And they always will. Which means every effort to revive a show named Comdex is doomed.

Do MediaLive's executives know this? Probably. Last year, they tried to turn Comdex into a show focused on enterprise IT. Attendance was barely half the 80,000 the company had hoped for. The name still drove people away.

In April, MediaLive created a user-oriented advisory council. The company also formed an advisory board full of vendors that had abandoned Comdex in recent years. MediaLive now has all the input it needs.

And last week, MediaLive spiked this fall's Comdex.

Don't bring it back, guys. Give us a new show in November 2005. One that helps enterprise IT people learn and make decisions for what they do today. One that can grow into *the* big show that brings the industry together. One that will give IT people a reason to come — and to forget Comdex.

If you don't kill Comdex, someone else will. And you've got a pretty good idea who. **47750**

FRANK HAYES, *Computerworld's* senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com.**

Where's the Fire?

For six months, pilot fish keeps replacing the PC monitors in this hospital operating room because staffers complain about a burning smell. The monitors all check out fine on the test bench, but why take chances? "They feared the monitors would spontaneously combust," fish says. "Finally, we discovered the culprit was the ballast of the operating room's fluorescent lights – when it caught fire during surgery."

SHARK TANK

Logic

After an operating system upgrade, this customer service department reports that its PCs won't turn on. "What we found was an entire department sitting at their desks, waiting for their computers to turn on by themselves," sighs tech pilot fish. "Their old PCs prompted them at shutdown to turn their computers off. The new ones turned off automatically. Logic dictates that if the computer shuts itself off automatically, surely it will turn itself *on* automatically. Right?"

That Explains It

Developer can't get his SQL Server machine to accept patches. Sysadmin pilot fish suggests everything he can think of, but the system still says the service packs aren't installed. Finally, they rebuild from the ground up – reformat, reinstall SQL Server, download service packs. "I double-click the executable, and it extracts," says fish. "The developer says, 'Let's see if this worked.' I respond, 'Don't you want to install it first?' He stares at me blankly and says, 'You mean that first thing didn't install it?' "

Yes, She Sure Can

It's the 1980s, and this IT shop hires its first woman, to do data entry. She soon masters that and wants to become a computer operator, but can she reload the line printer with 40-lb. boxes of paper stored across the building? Pilot fish explains the requirement. "She walks away into the office and soon reappears with an office chair," he says. "She rolls it in, muscles a box of paper onto the chair and rolls it back to the computer room." He tells boss, "She doesn't do it the way we do it, but she can handle the job."

Much Easier

This user calls every week with the same problem. So support pilot fish sends her a simple, four-step set of instructions for dealing with that problem. Two days later, she calls anyway. Did you read the instructions I sent? fish asks. "No, it's easier to call you," she says. So fish pulls out his own copy of the instructions and reads them to her. "Wow, that was easy," user says. "See, I knew it would be much easier if I called you!"

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